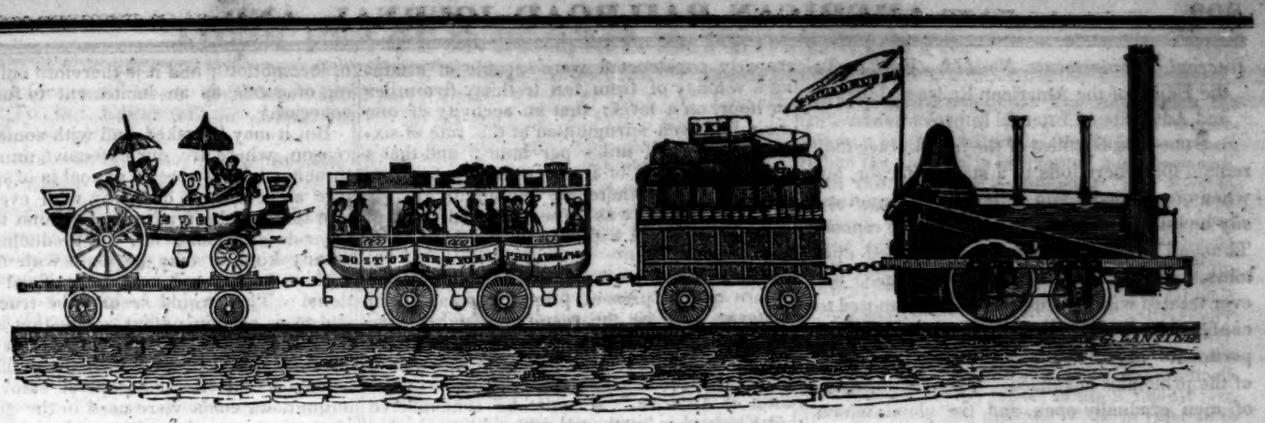


AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, DECEMBER 21, 1833. [VOLUME II.—No. 51.

CONTENTS :

Pennsylvania Canal Commissioners' Report; Delaware and Hudson Canal, &c. ..... page 801
Internal Improvements, No III. 802
Ithaca and Owego Railroad; Observations; Fourth Annual Report of the Chief Engineer of the Baltimore and Ohio Railroad. 803
Report of the Committee on Cars of the South Carolina Canal and Railroad Company. 805
Mallet's Apparatus for cooking by Gas Flame. 806
Six Years Rotation of Crops, and its Results. 807
Babbage on the Economy of Machinery and Manufactures, continued. 808
Literary Notices. 810
Foreign Intelligence. 813
Standing Committees of the House of Representatives of 23d Congress; Applications to the New-York Legislature; Advertisements, &c. 814
Meteorological Record; Bank Note Table. 816

AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, DECEMBER 21, 1833.

Pennsylvania Canal Commissioners' Report.—The report on the state of the internal improvements of Pennsylvania, made to the Legislature, by the Canal Commissioners, contains much information of an interesting and important character.

The Board believe that they may confidently calculate upon the opening of the canal navigation in the spring, by the 10th of March. At that time the following lines will be in use :

A railway from Philadelphia to Columbia twenty-two miles, with double tracks, and sixty with a single track, making	82 Miles
A canal from Columbia to Hollidaysburg,	171 4.3
Portage railway over the Allegheny mountain, between Hollidaysburg and Conemaugh, from basin to basin,	36
A canal from Conemaugh to Pittsburg,	104 1-4
Distance from Philadelphia to Pittsburg,	394 Miles
A canal from the junction on Duncan's Island, near the mouth of the Juniata, up the Susquehannah and North Branch to the mouth of Solomon's creek in Luzerne county, (two hundred and twenty three miles distant from Philadelphia,)	96 3-4
A canal from the junction at Northumberland, up the West Branch to the head of the pool of the Muncy Dam, in Lycoming county, [one hundred and ninety and a half miles from Philadelphia]	28 1-2
A canal from Bristol to Easton, on the Delaware, [eighty miles from Philadelphia.]	59 3-4
A canal from the Ohio river, twenty-eight miles below Pittsburg, up the Big Bever creek to New Castle, in Mercer county,	24 3-4
A canal from the Allegheny river at the town of Franklin, up French creek to near the feeder aqueduct, in Crawford county,	22 1-4
The continuation of the Portage railway along side of the basins at Hollidaysburg and Conemaugh, the Conemaugh feeder and Alleghenytown branch on on the Western division—the South fork and Raystown feeders on the Juniata division—and Lewisburg side cut on the West Branch divisions, form an aggregate of	8
Number of miles of canals and railway ready for use,	632

The Board enter into full details of the breaches and interruptions which have occurred on the several lines during the past season, which they represent as having been greatly magnified by "those governed by a mistaken policy." They maintain that the navigation of the main line of the Canal was maintained throughout the season with but slight delays, and speak with regret of the rumors of breaches and failures, having, in some degree, lessened the transportation business. The experience of the past season has enabled the Canal Commissioners to discover some defects in portions of the several lines, which they will be able to remedy in the course of the winter.

The amount of money expended for current repairs is as follows :

	Miles.	
Eastern division,	45	$12,163 53
Juniata division and feeders,	132	13,748 33
Western division,	105	23,854 15
Susquehannah division,	37	20,579 56
West Branch division,	26 1-2	20,956 27
North Branch division,	59 1-2	20,304 19
Delaware division,	59 3-4	59,408 33
French creek feeder,	19 1-2	5,699 01
		$179,013 37

The tolls paid into the Treasury during the year ending Oct. 31st, amount to $151,419 09, which sum, the Board believe, will be increased during the navigable season to near two hundred thousand dollars.

A minute statement is given of the situation of the Canals and Railroads, and estimates made of the amount necessary to place the whole in complete order.

The following sum has been paid within the last year, upon the several divisions, for damages, $72,244 10.

A statement of the sums appropriated and applicable to the new lines, and of the sums required to complete the same.

	Sums appropriated.	*Sums required.*
Columbia Railway,	$2,402,100 36	$801,895 58
Portage Railway,	1,214,793 06	367,816 35
Beaver division and Shenango towing path	424,241 62	57,011 36
Franklin line & north and west ends feeder,	348,100 29	94,398 05
Wyoming line and Lackawana feeder,	284,892 85	17,321 28
Lycoming line, and Lewisburg & Bald Eagle side cuts,	857,431 76	301,149 08
Frankstown line and South Branch feeder,	781,101 29	
Columbia line, eight miles, 227 perches,	165,750 30	
Sum required to complete,		$1,640,672 00
There will be required for new work upon old lines, and for the purchase of lots for houses and offices for collectors and lock keepers and to pay debts due,		100,000 00
To pay debts due by supervisors for labor and materials,	64,298 58	
For repairs the ensuing year,	410,701 42	
		475,000 00
To pay damages,		49,328 00
Amounting to,		$2,265,000 00

Delaware and Hudson Canal Company.—One of the morning papers states that the amount of tolls received by this Company during the past season, exceeds $3,000. This, we are informed, is a typographical error. The tolls exceed $37,000 on articles independent of coal. Of this latter 111,777 tons have this year been brought to market—953 vessels have loaded at Rondout with this coal, and carried 98,800 tons.

Statistics of the Globe.—The rapid population of the globe is estimated variously from 600,000,000 to 800,000,000; the geographical square miles at nearly 38,000,000, or 49,000,000 English square miles. The population to a square mile is, in France 61, Asia 27, Africa 10, America 3, Oceanica less than 1; the average of all about 17. The densest population in any whole province or state, is in Hamburg, where it is 1302 to a square mile. It is 980 in Bremen, 783 in Frankfort, 523 in Lubec, 464 in Lucca (Italy), 392 in Belgium, 314 in Saxony, 277 in Holland, 257 in Great Britain, the Sicilies 236, 208 in France, Austria 165, Prussia 155, Portugal 121, Denmark 119, Spain 101, Turkey 63, Greece 51, Russia 37.

In Asia some provinces have a population of from 200 to 500 to the square mile; Japan 139, China 42, Siam 57, English Indian Empire 185. In Africa, Morocco has 46, Tunis 45, and some of the interior kingdoms a little more. In America, Hayti has 36, Central America 12, Chili 10, United States 7½, Mexico 6.—[N. E. Farmer.]

Internal Improvements, No. III. By F. To the Editor of the American Railroad Journal, and Advocate of Internal Improvements.

Sir—The faculties of the human race may remain for generations in a state of torpor, but when once roused into action, they cannot easily be lulled again into inactivity and repose. Thus all innovations on old established customs, however plausible in appearance, are ever treated with distrust, and only admitted to confidence after a long series of successful experiments may have demonstrated the truth of the principles advanced. Then, as the eyes of men gradually open, and the cloud which had obscured their understandings is dispersed, they begin to marvel at the obtuseness of their own perceptions in not sooner comprehending the nature of the advantages predicted. How far this will be exemplified in the introduction of steam carriages on common roads, as a substitute for horse power, in the transport of goods and passengers, remains yet to be proved. Sceptics have not been wanting, to vociferate their timidity against its preferment, and pronounce its visionary character; and yet, the time may not be distant when the project will be hailed by the whole British nation as a confirmed blessing, and another step in the grand march of practical science. She may, ere long, be destined to witness her highways and byways, like her railroads and rivers, traversed from one end of the kingdom to the other, under the all-pervading influence of steam.

Experiments have already been made on a large scale, and with sufficient success to demonstrate to the minds of all those who feel an interest in the subject, the practicability, as well as capability, of the project, to realize all the hopes and expectations with which it has been endowed by its projectors. That it is destined, at no very remote period, to mark a new and important era in the means of intercourse among our transatlantic brethren, it would be folly to entertain a doubt; but, at the same time, we do not hesitate to say, that however applicable it may be to their present condition, the time is not yet arrived when its adoption as a matter of expediency can be recommended to this country. Our situation, in this respect, is in no way analogous to that of Great Britain. What would act as a benefit and blessing to her, would, in this case, prove a positive evil to us. But, before attempting to maintain this position, it will be necessary to state the principal objections already advanced against its introduction. They are as follows:—The insecurity of carriages so propelled; the liability of boilers to explosion; the annoyance of travellers by noise of machinery, and the escape of smoke and waste steam. These objections were in part answered before the House of Commons, during the examinations there held to collect information on this subject. It was then stated that the construction of the boilers was such that the steam could only act in very small quantities on any one part, and that even in the event of explosion, the danger would be comparatively trifling, and seldom or never attended by loss of life; that the escape of smoke might be prevented by the use of coke; and that the waste steam might be made to pass into the fire to increase the draft. It was further stated, that carriages properly constructed were capable of attaining a velocity of from ten to thirty-five miles per hour, on a level; that an acclivity of one in six had been surmounted at the rate of sixteen and a half miles per hour; and that a practical velocity of from twelve to fourteen miles per hour, where the minimum breadth of the wheel tire was three and a half inches, might be sustained without injury either to carriage or road.

How far these positions will hold in practice we are not at present prepared to say. But whatever may be the result in England, we need not hesitate to repeat the assertion that the period is very remote when the adoption of steam carriages will be deemed justifiable on the roads of America. It must be remembered that England is burthened with a large surplus population, and that every tax on agricultural produce, as a consequence, is accompanied by a proportionate degree of distress. Every suggestion therefore, in the way of relief, commands immediate attention, and receives encouragement and support according as its merits may seem to justify. In Great Britain, there are more than a million of horses engaged in various ways in the transportation of goods and passengers; and it is estimated that it requires as much land for each horse as would on an average support eight men; or, in other words, the adoption of this new project would increase the capacity of the country to maintain eight millions of souls over and above what it is at present burthened with. Now, under these circumstances, it cannot be denied that the subject is deserving the attention of all philanthropists, not only as having a tendency to allevinte the distress of a large and meritorious portion of the population, but also as obviating the existing necessity for the abuse of that noble spirited animal, the horse. But these arguments cannot obtain in a country like our own, where the whole amount of population is small in comparison of the extent of territory; where large tracts of fertile land yet remain untilled, and extensive forests unlopped, by reason of the paucity of agriculturists. These blanks must be filled up before our harvests can possibly prove unequal to the demand made against them; and then it becomes a question of economy as combined with general convenience to all classes of persons interested.

As to economy, it is roundly asserted by our brethren on the other side of the water, that steam coaches can be run for from one-third to one-fifth the cost of post coaches. This may be true enough—indeed it is believed to be so, from the fact that an ordinary coach, weighing two tons, can carry but eighteen persons, while a steam coach of the same weight, may be made to carry double that number, and that the action of the wheels, where the tire is six inches wide, has a tendency rather to consolidate than cut up the road.

But another consideration of more importance to us claims attention, in the price of coke, which must necessarily enter largely in the expense of running all engines of whatever description, where steam is to be rapidly generated. It is a well established fact, that the price of this article is much greater in this country than in any other; so much so, that it becomes a question whether its use would not thereby be altogether unavailable. Should this prove to be the case, then other means must be resorted to for the destruction of the sublimated and volatilized matter always attendant on the combustion of coals in their natural state. This not admitting of any chemical combination, must be effected in some way by mechanical means. Before the House of Commons, it was stated that the effect might be produced by causing the smoke to pass through sand mixed with quicklime, by which the carbonic acid being absorbed, the carbonic oxyde and hydrogen was left in such a free state as to be combustible. This process, however, is altogether too slow in its operation to admit its practical application for any purposes of locomotion; and it is therefore only deserving of notice as an incitement to further discoveries.

But it may be asked, and with some show of reason, where are our extensive mines of anthracites? This species of coal is of such a nature as at once to do away with every objection that has been advanced against the use of other descriptions; for, not producing smoke of any kind, it may be used with impunity, without having recourse to artificial preparations. This would seem to be true enough, and to a certain extent is so—that is to say, the use of anthracite coals would most assuredly remedy the evil to which the public would be exposed from the escape of smoke, where bituminous coals were used in the generation of steam to propel carriages; but the difficulty unfortunately rests in the fact that steam cannot be generated with sufficient rapidity for this purpose, without the action of flame upon the boiler; and the combustion of this coal not producing any flame, recourse must be had to some extrinsic means for the attainment of that end. This end, it is true, has been particularly attained by experiment in the decomposition of water, by passing a jet under the action of the engine, constantly over the bed of hot coals. But this experiment, though it may eventually be made to answer the purpose, does not as yet seem to have been sufficiently tested in practice to render it available in ordinary cases; and as we do not wish to indulge in speculations of any kind, we shall forbear to express an opinion on the subject until the results of more extended trials may be made known.

It requires, however, no great stretch of human foresight to predict that the introduction of steam carriages on common roads will be a signal to the abandonment of all ordinary modes of travelling. They must be exclusively adopted or not at all, and therefore it will be necessary for all persons, desirous of moving from place to place, to be dependent entirely on the public conveyances for its accomplishment. Now, it is a well known fact, that all farmers who inhabit mountainous districts, or such as are yet unpenetrated by either railroad or canal, must of necessity be their own carriers. The expense of maintaining one, two, or more horses, is comparatively trifling. They are absolutely necessary to the prosecution of their agricultural pursuits, and after their harvests are gathered in, they are equally useful in the transportation of the proceeds to market.

These observations naturally suggest themselves as objections to the introduction of this new mode of conveyance among us for a long time to come; and they are introduced here simply because we think that we have discovered a growing disposition among some of our speculators to embark in the project. Our necessities alone should dictate the period when this revolution ought to take place; and even then, where so many changes are to be made, so many prejudices to be overcome, and so many jarring interests to be reconciled, all the influence of legislative support will be requisite to establish it on a firm foundation.

This period, however, it is believed, has already arrived in England. She feels herself bending under a burthen which, unless soon lightened, will eventually bear her down. She feels the necessity of adopting some decided measures for the relief of the lower orders of society. With these feelings generally prevalent, it is not to be surprised at that her mechanics should take advantage of the first opportunity, that offered a fair prospect of success, to start a fresh track, and open a new avenue to the resources of the country. The facilities afforded by the genius of McAdam pointed out the way; the hard and uniform surface of his roads suggested the practicability of the undertaking; and although we sincerely deprecate its immediate adoption here, we earnestly wish it all the success, in the land of its birth, that its undoubted merits have a right to claim.

F.

New-York, 8th Dec., 1838.

Ithaca and Owego Railroad. By JAMES SEYMOUR. To the Editor of the American Railroad Journal.

DEAR SIR,—In the latter part of September last I travelled over the route for the Ithaca and Owego Railroad, in company with Mr. H. C. Seymour, one of the assistant engineers. The following hasty notes made at the time are at your service:

The length of this road from Owego to Ithaca is about 29 miles, chiefly along the valley of the Owego Creek. The summit is 20¾ miles from Owego, and its height above that place is 376 feet. The depression from the summit level to Ithaca is 602 feet—distance about eight miles. The country along the route is favorable for the construction of a railway.

Mr. Randall, the Chief Engineer, estimates two-thirds of the grading done upon the line—two miles of the rails laid—and that the road will be ready for transportation early in the ensuing summer.

There are two inclined planes between the summit level and Ithaca. The length of the first, (descending from the summit towards Ithaca,) is 2,225¾ feet; rate of ascent 1 foot in 21. The length of the second, (or nearest Ithaca,) is 1,733½ feet; rate of ascent is 1 foot in 4·28 feet.

It is proposed to use one stationary power, which is to be placed between the two planes above described, but only applied upon the second, or the one nearest Ithaca; upon the other horse power is to be employed (at present), as well as upon the remainder of the road. It would seem probable, however, from the proximity of the two planes, and from their being on a line with each other, together with the road between them, that stationary steam power will ultimately be adopted to move the cars upon both, which may be done by an engine of sufficient power.

The curves upon the road appear to be regular, and uniform, and of large radius.

The plans adopted for the construction of the road are as follows:

Upon the chief part of the road, after the bed is formed, trenches are sunk crosswise of the road, into which ties are placed about four feet apart, and then trenches made lengthwise about one foot in depth, filled with gravel, upon which longitudinal sills, 4 by 12 inches, are placed. Upon these sills cross ties are laid, about 3 feet apart, with notches or gains cut to receive the rails, upon which the iron plates, ⅝ by 2½ inches, are to be placed. The width of the track is 56½ inches.

Upon another part of the road a different plan is adopted. Trenches are sunk crosswise of the road, about 3 feet apart, into which cross ties are placed to receive the longitudinal sills, and giving the sill an equal bearing from end to end. Upon these sills narrow strips of oak or ribbons are placed, to receive the iron plates.

Railroads constructed upon either of the above plans answer very well; but a plan similar to the last above mentioned is preferable, for these reasons: the rails upon which the cars move present a more permanent and solid surface, and the cost is not as great by at least $1000 per mile.

Your humble servant,
JAMES SEYMOUR.

Montrose, Nov. 11, 1833.

"The observations made during a single voyage across the Atlantic, by a single observer, M. Humboldt, on the aspect of the Antarctic region of the heavens—the peculiar azure of the African sky—the luminous meteors of the atmosphere—the tides, the currents, and the different colors of the ocean, and other phenomena which happened to present themselves to his view—are of more value to the scientific world than the observations of ten thousands of other beings who, for a series of years, have traversed the same regions."

Fourth Annual Report of the Chief Engineer of the Baltimore and Ohio Railroad.

Engineer's Office, Baltimore and Ohio Railroad.
Baltimore, Oct. 5, 1833.

TO PHILIP E. THOMAS, *President, &c.*

The fourth annual report of this department which I have now the honor to present will be rendered the more brief on account of the advanced stage and the greater maturity of our operations. In the more early progress of this work, with the very limited stock of information then before us, it was found indispensable that novel applications of principles should be investigated, and that many experiments should be made, requiring the utmost skill and science at our command, and the most anxious care and industry on our part in order to arrive at safe and satisfactory conclusions. These investigations have been actively prosecuted; principles have been combined; many experiments involving very complicated details have been made, and results of high importance to the railroad system have been obtained; the railway has been put into successful operation, and it now only remains to pursue the design by giving to the machinery its required extension, and availing of its utmost perfectibility, in order to accomplish to the fullest extent of economy the great task in which we have been engaged.

In my last annual report it was announced that the new locomotive steam engine "Atlantic," built by Davis and Gartner, of York, Pa. had performed satisfactorily with anthracite coal as the fuel, through the test of a month's use on the railroad. This engine employs cast iron chilled wheels, three feet in diameter, and is geared to obtain twice the speed on the road that would result withouf the gearing, with the same velocity of piston, and is constructed with the upright tubular boiler of Cooper.

Much service has been performed by this engine in the course of the past year, but as several such machines would have been required to do all the work of transportation, and as these were not upon the road, the entire horse establishment had still to be maintained, and consequently it was not desirable to work this engine to a greater extent than would be necessary to evince its continued efficiency, or to detect its errors or deficiencies, should any be found to exist either in principle or construction. This precaution of subjecting it to a sufficient test seemed to be necessary previous to venturing upon an expenditure on many such machines, and more so as from unavoidable defects in the consistency of the material of the working parts, (common to all machines,) and the complication and great and sudden variation in intensity of the strains upon them in the course of locomotion, our knowledge of the correct proportions of these parts could be obtained only through experience. This engine is still in operation, and the result is entirely satisfactory, as to the boiler and the combustion, as well as the exclusive use of anthracite coal, and consequently as to the *power* of this machine, and nothing more is wanted to demonstrate the entire practicability and utility of this fuel for the locomotive engine. It is true that some economy of fuel may be realized from slight modifications in the fire place, boiler and tubes, and especially by giving additional length to the latter. The modification last mentioned has already been resolved upon in relation to future engines. Although the engine has been in use many months, and has run upwards of 13,000 miles, yet not a single tube has failed or given way, and consequently there is reasonable ground to expect that the tubes, (though of iron,) will be comparatively durable.

The circumstance of a more rapid change of place and circulation obtaining amongst different portions of the water, and the impossibility of the subsidence and lodgement of sediment upon the tubes when these and the boiler stand upright, would lead us to expect, independent of experiment, a greater duration of the tubes than when they are horizontal in a boiler of corresponding position. The time which the tubes have lasted in the Atlantic, and the frequency of their failure in the English engines, when the position is horizontal, appears to confirm the foregoing conclusion. The English have employed both iron and copper tubes, but still complain that the frequent failure of these constitutes one of the greatest sources of expense attendant upon the working of the locomotive engine, and tubes of brass are proposed at Liverpool as likely to produce economy. With the upright boiler, however, it does not appear that much loss from the burning out and bursting of tubes, will be experienced. Nevertheless, in my report of the 27th July last, hereunto annexed, marked W. R. in relation to the proposed Washington railway, I have estimated the annual cost of tubes for an engine in constant use at $504. That this sum will be fully adequate to the object, there can now be but little doubt.

Two points of great interest, therefore, in relation to the value of steam locomotion upon railways, have been determined, and efficiently combined under the auspices of the Baltimore and Ohio Railroad Company upon their road, viz.: 1. *The upright tubular boiler*, and 2. *The successful application of anthracite coal.* The first has the advantage of durability, compactness, and above all, of a most rapid generation of steam; the second gives a cheap fuel, free from smoke and sparks, for locomotives employed in the states bordering upon the sea coast. The latter will sooner or later be viewed as a most useful attainment in connection with the railway system, when the benefit which this company will have conferred upon the community in attaining this object will be felt and acknowledged. From a recent discovery of anthracite coal on the Potomac river, it is probable that the price of that fuel will yet be reduced much below its present cost, and that the advantages to the company from the employment of the locomotive engine will be proportionally increased.

The course of trial, however, that tested and proved the adequacy of what may be denominated the vital parts of the Atlantic engine already described, has, at the same time, served to discover certain defects in the consistency and proportion of those working parts most liable to wear and break. It was found that the driving road wheels, each of which worked upon the rail, with an insistent weight of two tons, soon yielded to the action and became worn, especially upon the more conical part near the flange, where the form became changed in a considerable degree from the circular to the polygonal—causing jolts and concussion, especially when the engine moved at considerable speed; and abating the efficacy of the machine, more particularly in curves, whilst the unevenness in the motion tended to injure the spur and pinion wheels, whose office it is to multiply the speed. Moreover, the axles that were at first used, proved too weak to withstand the strains to which, at times, they were subjected, and their fracture, and simultaneously that of the spur and pinion, ensued. In all this no fault could justly attach to any one, dimensions had been given that seemed ample to oppose the probable strains, and from calculation, based upon the experimental trials of the strength of malleable iron, and the assumed probable stress, the result was equally favorable to a sufficiency of strength. But to the well ascertained strains to which the revolving parts of local or stationary engines are subject, there was superadded, in the progressive motion of the locomotive, certain lateral impulsions of unforeseen and therefore unknown intensity, that presented a problem in which a new term had to be determined experimentally in the running of the engine itself upon the railway. Accordingly, the axles have been increased in diameter so as to withstand the trials to which they are liable. This remedy was a plain one. The comparative strength being as the cube of the diameters, a small increase of dimension in that direction would render the strength relatively insupera-

ble. It was likewise found that sufficient strength to prevent fracture could readily be given to the cast iron locomotive road wheels of three feet in diameter. But the evil already alluded to of a deficient degree of hardness to be obtained in the process of chilling was a very different affair, and not to be remedied by simple addition of dimensions. It was discovered that by the method hitherto practised, the three feet wheels were less effectually chilled than the two and a half feet wheels; and this was accounted for from the known fact that, in cooling, the larger wheel would contract to a greater extent, and recede further from the rigid iron chill, applied to the exterior of the periphery, than would the smaller wheel, from the chill applied to it: and, consequently, in the case of the larger wheel, although the exterior of the rim should be chilled in the instant of casting, yet on receding from the cold iron of the chill, the interior unchilled parts would immediately impart a portion of heat to the exterior chilled parts sufficient to *anneal* the latter, and destroy the effects of the chill. Thus the efficacy of a coned wheel, if more than two and a half feet in diameter, seemed to be lost; and the consequences would have been serious. The science, skill and genius of the Engineers and Mechanics in the service of the company were therefore no wdirected to this point, and I am happy to be enabled state in this communication that two successful methods of attaining a good and perfect chilling have been suggested and put into practice. The one method consists in applying to the inner periphery of the rim on the side of the spokes next to the flange, and in the region of the conic part, *a second chill concentric with the first or exterior chill.* Now as the contracting metal, immediately after casting, recedes from the exterior chill, it would press upon the interior one, whilst the contact would cause the latter chill to absorb the heat that would otherwise have *annealed* the exterior periphery of the rim, and destroyed the hardness already communicated from the exterior chill. The process in trial justified the expectation, and a perfect chilling was attained, precisely in that part of the rim where most needful. This manner of effecting the object was first proposed by Ross Winans, assistant engineer of machinery. In the commencement the failure of this process was threatened from a mechanical difficulty that may here be mentioned with the obviating expedient that proved effectual. So soon as the fluid metal should begin to coal it would shrink and contract upon the interior chill of cold rigid iron, and with an intensity increasing rapidly with the abstraction of heat, at the same time that the malleability would diminish, and the consequence would be fracture. At first it was suggested to elevate, by means of a lever and appropriate connexions, the chill from the rim of the wheel, as the latter should contract, a slope upon the surface of the chill being given to facilitate the operation. It was, however, thought to be difficult, if not impracticable, to execute this design for every wheel and with proper and timely effect, and it was abandoned for the effectual method that immediately succeeded in the course of thought, and which bears the test of experiment. It is simply to give such a slope to the face of the chill; that it shall slide on the correspondingly sloped face of tee casting as the latter shall cool and contract. The form of the chill is that of a conic frustrum with the smaller end downwards upon the arms of the wheel, and the slope of the slant side makes an angle with the axis of the cone of 30 degrees, and imparts to the interior surface of the rim of the wheel a form consistent with strength and symmetry. As the metal cools in the new cast wheel, its contractile force overcomes upon that angle the friction, gravity, and inertia of the chill which slides upon the grasping metal of the rim, and is elevated, presenting in its upward movement successive lesser dimensions to the contracting wheel, whilst the latter, from its tenacity being more than equal to the sum of the three forces that oppose the displacement of the chill vertically, is not fractured. In this process the rim of the wheel is chilled and hardened thoroughly from the exterior to the interior side between the flange and the part where the spokes attach. It is consequently, however, rendered more liable in use to be fractured from concussions upon the railway, but this may be obviated by adding metal and giving additional thickness to the rim.

The other method of securing the efficacy of the chilling process in a very effectual degree was proposed by Phineas Davis, and consists in casting the rim so that the fluid metal shall surround and inclose within its body a ring of cold malleable iron concentric with the wheel. The effect of the presence of the ring in the interior of the body of the casting, is to abstract the heat from the fluid mass to an extent that assures a perfect chilling on the exterior of the rim, notwithstanding the recession from the chill in cooling; whilst the chilling power of the ring does not extend to harden the inner or opposite side of the rim, which is therefore not quite so liable to fracture as is chilled according to the method previously described. The method with the ring or rings (for there may be two of them) has the superadded good property of giving strength to the wheel, and safety from disaster in case of the fracture of the cast metal in rapid movement upon the railway, since the tenacity of the malleable ring or rings situated in the midst of the body of the ring, and pervading the whole length of the periphery, will be competent to hold the wheel together and prevent its parting, even after the occurrence of a fracture in the rim. Several wheels formed after this method were broken with a heavy sledge hammer, but the segments of the fractured rim were still held together by the tenacity of the unbroken malleable ring, which last was found to be so exceedingly tough, that it was necessary to cut it before the broken parts of the casting could be disengaged one from the other. These examinations furnish ample evidence of the very best of chilling due to the presence of the ring, and of its probable value as a ligament to give strength and safety to the cast iron railway wheel. The principle and its efficacy having been applied and ascertained, it remains to reach the utmost advantage by the necessary modifications and adaptations; to ascertain whether there should be two rings or only one; what should be the thickness of iron composing them; what form of section, whether round, square or otherwise; what should be the thickness of the rim enclosing them, and what should be their best position in the area of the cross section of that rim, &c. It is probable that a single ring to a wheel will be entirely sufficient, and that for a three feet wheel it should have a rectangular section equal in area to about the fourth part of a square inch.

The wheels now upon the Atlantic engine have rings in them, and they work and wear satisfactorily: and it is confidently believed that this discovery will be of great advantage in locomotive wheels as well as in those of passenger coaches drawn by steam power at high velocities, and that a wheel made after this manner might well be denominated *the safety wheel.* Whether for car-wheels in general, and of a diameter not extending about two and a half feet, the first or the second method of chilling, as already described, will be on the whole preferable, cannot now, perhaps, be fairly decided, but must probably be left to the lights of maturer experience.

From the improvements and modifications already made and matured, no doubt is entertained but that the company can have constructed in their own shops now constructed for that purpose, and for other objects connected with their railway machinery, locomotive engines of a very efficient and comparatively economical character, and more so, perhaps, than those of any other model hitherto imported from Europe. I do not hazard this sentiment from a mere feeling of partiality to the genius of our countrymen, but from a belief that the results will be fully realized. Notwithstanding, if it shall be thought proper, one or more English engines, of the most approved form and construction, might be imported and probably used with advantage upon the railway, now being made to Washington, inasmuch as, from the straightness of that road, an opportunity will there be afforded for a fair comparison between rival machines of this kind and of the most varied form.

Since the time of the last annual report, a second locomotive engine, built by Phineas Davis, was placed upon the road. This machine differed from the Atlantic engine in being lighter, and in the substitution of the crank axle, in lieu of the spur and pinion wheels, the position of the cranks being inside of the road wheels. The engine was calculated for the slower speeds, and was intended to be employed in the conveyance of commodities. The power of its traction was perhaps equal to that of the Atlantic engine, in proportion to the weight or the adhesion upon the rails, but the economy of fuel was probably rather greater in the Atlantic. Upon the whole the new engine was a good one, though somewhat inferior to the other. From some cause, the crank axle was broken, and a question arose whether it was not advisable in repairing the engine, to gear it in the same manner as the Atlantic, the performance of which had been very satisfactory. After mature deliberation, it was resolved to gear it by placing the pinion upon a shaft distinct from the axle of the road wheels, having connecting rods to cranks upon the shaft and axle *outside* of the wheels. This expedient of a separate shaft was adopted to obviate the damage that might occur to the spur and pinion from any jars or undulatory action of the road wheels, and since this engine was lighter than the Atlantic, and as much adhesive power would be needful in the traction of heavy trains upon the railway in the curves and ascents, it was furthermore deemed proper to avail of the adhesion of all the four wheels by means of outside cranks and connecting rods. A great, if not a vexatious delay has been experienced in procuring these repairs, although the work was confided to an establishment of good character and much business, but there is now a prospect of having it upon the road in the course of a few days. The performance of this machine will be seen with much interest, as it will test the advantage of several improvements which have been suggested and are introduced in its structure. The result will consequently have an important bearing upon the manner of arranging the working parts of the locomotive engines now about to be constructed.

It is not thought proper, on the present occasion, to travel over grounds heretofore occupied in the annual reports, as regards the motive power and machinery, or to repeat what is said upon this subject, in my report upon the routes of the proposed railway to connect the cities of Baltimore and Washington, already referred to as a document annexed to *this* report: it may, however, be mentioned, that our confidence in the use of steel springs for the burthen cars as well as for the passenger coaches, remains unabated; and that this subject, in common with others of utility in railways and railway machinery, has continued to claim our especial care, and the result will probably be, the fabrication and adoption of steel springs entirely efficient and very durable, the prime cost of which, inclusive of appurtenant fixtures, shall not exceed the one-third part of that of *leather braces*, or even of the springs of steel as hitherto made and used to sustain equal stress elsewhere.

No extension of the railroad having been made within the year just closed, there will be nothing to offer under that head; and the lettings upon the first Division of the Washington railroad are of such recent occurrence as not to require from me in this place any special mention or detail.

In the transportation department there has been a constant accession of business, both as regards the quantity of commodities carried, and the number of passengers conveyed, and there is every just ground to expect a continuance of increase of revenue from these sources, and an adequate remuneration for the expenditures incurred. It is probable that this desirable result will be realized in a shorter time from the commencement of the undertaking than has been experienced in most public works in our country, that have nevertheless proved highly successful and profitable. Much credit is due to the Superintendent of Transportation, William Woodville, for his vigilance, and for the degree to which he has economized the expenses in the department committed to his care, and we are assured, that these expenses will by no means increase in the ratio of the receipts. In connection with this part of the subject is the economy of passing the planes at Parr's ridge, hitherto effected with horse power, by the usual manner of working that animal on other parts of the road. As the tonnage of the transit augments, the economy of this power over that of steam, by fixed engines and the appropriate appendages, becomes more equivocal, and it is believed, that the time has nearly arrived when it will be proper to commence the erection of stationary engines. The transit over the inclined planes by these will doubtless be performed in a cheaper and much more convenient manner than with horses, when the accession to the trade and intercourse consequent upon the extension of the railroad to Harper's Ferry shall be realized. Estimates and comparisons will be instituted by this department upon this subject, and in due time reported with the necessary plans.

With regard to the extension of the Baltimore and Ohio Railroad from the Point of Rocks to Harper's Ferry, it may be remarked that the Chesapeake and Ohio Canal Company have located, and are engaged in the construction of the graduation of the Railroad through the narrow passes, comprising a distance of four and one-tenth miles, in pursuance of the compromise entered into between the Canal and Railroad Companies. A line of location for the railroad has likewise been traced and staked out under the directions of this department, by Caspar W. Wever, embracing the residue of the distance, and equal to about eight and one-fourth miles. This line met with my approbation, and was then submitted with the drawings to Alfred Cruger, Engineer and Commissioner on the part of the Canal Company, for his approval.

After conference and deliberation he proposed certain alterations in the line to render it acceptable on his part; to these alterations I acceded. Having thus come to a mutual understanding in a written correspondence, which was duly reported by me to thee, and the arrangement having been approved and sanctioned by the Board, will doubtless be likewise approved by the Canal Board, when no obstruction will exist to a consummation of the compromise in a speedy construction of the work to Harper's Ferry.

Surveys of the country between the city of Baltimore and the city of Washington have been continued with a view to perfect the location of the route for a rail road to connect those cities, and drawings, calculations and estimates, of several of the most feasible routes, have been made, and were reported on the 27th July last, for a more full account, in relation to which, see document W. R. annexed, and herein before referred to. The Board having decided in favor of the *upper route No.* 2, as combining the most advantages for a railway, such as is proposed to be formed upon a line of intercommunication of great importance, I have proceeded without delay, in obedience to thy instructions to that effect, to assign the definitive position of the line, and stake it out for contract. The first division, extending from the Baltimore and Ohio Rail, road to, and inclusive of, Merrill's Ridge, and the fourth division, extending from a point near Bladensburgh to the boundary line of the city of Washington, both together about eleven miles, were staked out for contract during the time of the pendency of the question with regard to a preference of the routes, these two divisions not having been involved in that question. In the execution of the final survey now mentioned, the first division has been much improved in its location by laying it upon ground requiring less masonry and much less excavation and embankment. The surveying party is now engaged upon the second and third divisions, comprising a distance of about eighteen miles, which will be prepared for contract in the course of a few weeks, or as soon as practicable. The surveys, levellings, drawings and calculations in relation to the routes for this railroad, have been conducted under my direction by B. H. Latrobe, assistant Engineer, whose services have been faithfully rendered and continue to be highly valuable.

Respectfully submitted, J. KNIGHT.

Chief Engineer Balt. and Ohio Railroad.

Report of the Committee on Cars, to the Direction of the South Carolina Canal and Railroad Company, submitted 20th November, 1833.

The Committee on Cars, to whom was referred the several Resolutions of the Stockholders, requiring information on the following points, viz.:

1st. What is the cost of each locomotive, and from whom bought.

2d. The time of arrival of each locomotive from the period when contracted for.

3d. State the performance of each locomotive on the road.

4th. What derangements have taken place in the machinery, and the causes of such derangement, so far as has been ascertained, whether from bad materials, bad workmanship, or defect in the principle of construction.

5th. Have any, or what locomotives, been constructed on the plan of the English engines, and what has been the comparative performance of such.

6th. Have not the locomotives heretofore received been generally constructed upon the plan of English engineers, but with *supposed* improvements, suggested by our engineer; and have not such supposed improvements already failed in several instances.

7th. How many of them are now in use, and how many laid by for repairs.

Beg leave to report, that they have bestowed the best attention to the subject, that the limited time and other circumstances would permit. The Committee handed a copy of the subject matter referred to them to the Chief Engineer, in order to obtain from him such information as would aid them in their deliberations. The Committee also entered into a minute examination of the master of the works, the several engineers charged with the management of the four and eight wheel engines, and the superintendant of the repairs of the road, with the view of embracing more fully the obvious purport of the resolutions. The Committee submit the following replies to the queries:

To the 1st, 2d, 3d, 4th and 7th.

The following statement contains the names, contract prices, time when due, and time when put to work, of the several engines employed on the road:

1. Received Dec. 1830, Best Friend, 4 wheels, $4,000 00, due June 1830, put to work Dec. 1830.

2. Rec'd April, 1831, West Point, 4 wheels, $3,250 00, due January 2, 1831, put to work July 15, 1831.

3. Rec'd January, 1832, South Carolina, 8 wheels, $5,000 00, due January 15, 1832, put to work Feb. 24, 1832.

4. Rec'd March, 1833, Charleston, 8 wheels, $5,750 00, due Jan. 15, 1833, put to work Sept. 1, 1833.

5. Rec'd June, 1833, Barnwell, 8 wheels, $5,750 00, due Feb. 15, 1833, put to work, June 15, 1833.

6. Rec'd September, 1833, Edisto, 8 wheels, $5,750 00, due March 15, 1833, put to work, Sept. 11, 1833.

1st. The *Best Friend* had its boiler destroyed by explosion, June 1831. Her cylinder and working parts were made use of in the construction of the *Phœnix*, built by the Company in Charleston, the boiler of which is on the principle of the *Best Friend*. The arrangement of the machinery and boiler is different, having the cylinders working outside, and the weight much more equally distributed. This engine was put to work 18th Oct. 1832.

2d. The *West Point* was removed from the road 4th June, 1833, for the purpose of introducing an outside arrangement of her machinery, similar to that which has proved so successful in the Phœnix. This required a new frame, otherwise much wanted, and new wheels. The wheels have at length been received, and the axles are expected daily; the other work is considerably far advanced, but in consequence of a want of hands, nothing has been done on her for a considerable time,—the work is now resumed.

3d. The boiler of the *South Carolina* failed 27th December, 1832, and the engine not replaced on the road until the 10th April, 1833, when, after an ineffectual attempt to use her for some weeks, it was found necessary to construct new frames, which had always been too slight, and to alter the part of the boiler over the fire-place according to the plan adopted in the new eight-wheel engines, for which purpose the engine was taken off the road on 8th September, 1833, and it has not yet been in our power to effect this object, not having had a sufficient number of men to do much to her. Previous to the failure of the boiler, much trouble and delay had arisen from the breakage of her pipes, which difficulty was, however, completely overcome; and from the use of cast iron and wooden wheels which failed repeatedly, but have now been replaced with cast iron wheels with wrought iron tires. Her axles, too, were constructed of a much less perfect material and plan, and were broken several times. In replacing her on the road, no alteration is contemplated in the principle, it having given great satisfaction, and the working parts and arrangements having never failed in the least.

4th. The *Charleston* was received in April, 1833, but the boiler requiring and receiving additional workmanship on the part of the manufacturers, the engine was not put to work until the time named, Sept. 1833. This was the engine erroneously supposed to have failed in consequence of her small flues, but in fact the difficulty of her draught was entirely removed by making the smoke-stock and discharge pipes as they were originally expected to be. Very considerable work has been done on this engine by the hands of the Company, but chargeable to the contractor. It has been found necessary to make more perfect the connections between the frames and axles of this engine, and it has been done most effectually. Much trouble has been had with this engine, from the inadequate strength of her valve gearing, and it is intended to replace it with stronger as soon as it is in our power to do so.

5th. With the *Barnwell* there has been similar difficulties with the valve gearing, but not to so great an extent, as they are better proportioned, although not strong enough. The pumps of this engine have not always worked well, and when the use of water containing much sediment, rendered them still more inefficient, the flues were injured by permitting the water to get too low, and eventually, after an injudicious continuance to run her after a failure to supply, the flues were so much impaired by the heat as to render it necessary to have them taken out. The flues being large ones were put in with collars, and it has been necessary to take the boiler apart to put in new ones. The engine has been off the road since 20th September, 1833. Her new flues have been received and will be put in with rings, which will allow any tube to be replaced with little delay or trouble. The repairs will now go on as fast as our force will permit.

6th. The *Edisto* has performed very satisfactorily with the exception of breaking one of her wheels (in the centre of the hub) and two of the sidelegs which support the boiler. It is supposed that the wheel received some extraordinary strain, as other wheels of the same construction have with the other Engines given great satisfaction. The valve gearing of this Engine is better proportioned than any of the others, but even in this, is not of that excess of strength which renders liability to failure exceedingly improbable.

To present at one view the manner in which the Road has been supplied with Engines for successive periods since the running of the West-Point alone on the Road, from June 1831 to Feb. 1832, when the South Carolina commenced running, we have as follows:

Feb. 24, to Oct. 18, 1832—8 months, 2 engines—West Point and South Carolina.

Oct. 18, to Dec. 27, 1832—2 months, 3 engines—W. Point, S. Carolina, Phœnix.

Dec. 27, 1832, to April 10, 1833—4 months, 2 engines—W. Point and Phœnix.

April 10, to June 4, 1833—2 months, 3 engines—Phœnix, S. Carolina, W. Point.

June 4, to Sept 1, 1833—3 months, 3 engines—Phœnix, S. Carolina, Barnwell.

Sept. 1, to Sept 11, 1833—10 days, 3 engines, —Phœnix, Barnwell, Charleston.

Sept. 11, to Sept 21, 1833—10 days, 4 engines—Phœnix, Barnwell, Charleston, Edisto.

Sept. 21, to Nov. 20, 1833—2 months, 3 engines—Phœnix, Charleston, Edisto.

It must be borne in mind, in looking at the above list, that all that have ever been put to work on the road, have been considered as at work, with the exception of the S. Carolina, taken off on account of failure of boilers, Dec. 28th, 1832, and again taken off, boiler being still unsound, and new frames being required, on Sept. 8, 1833.

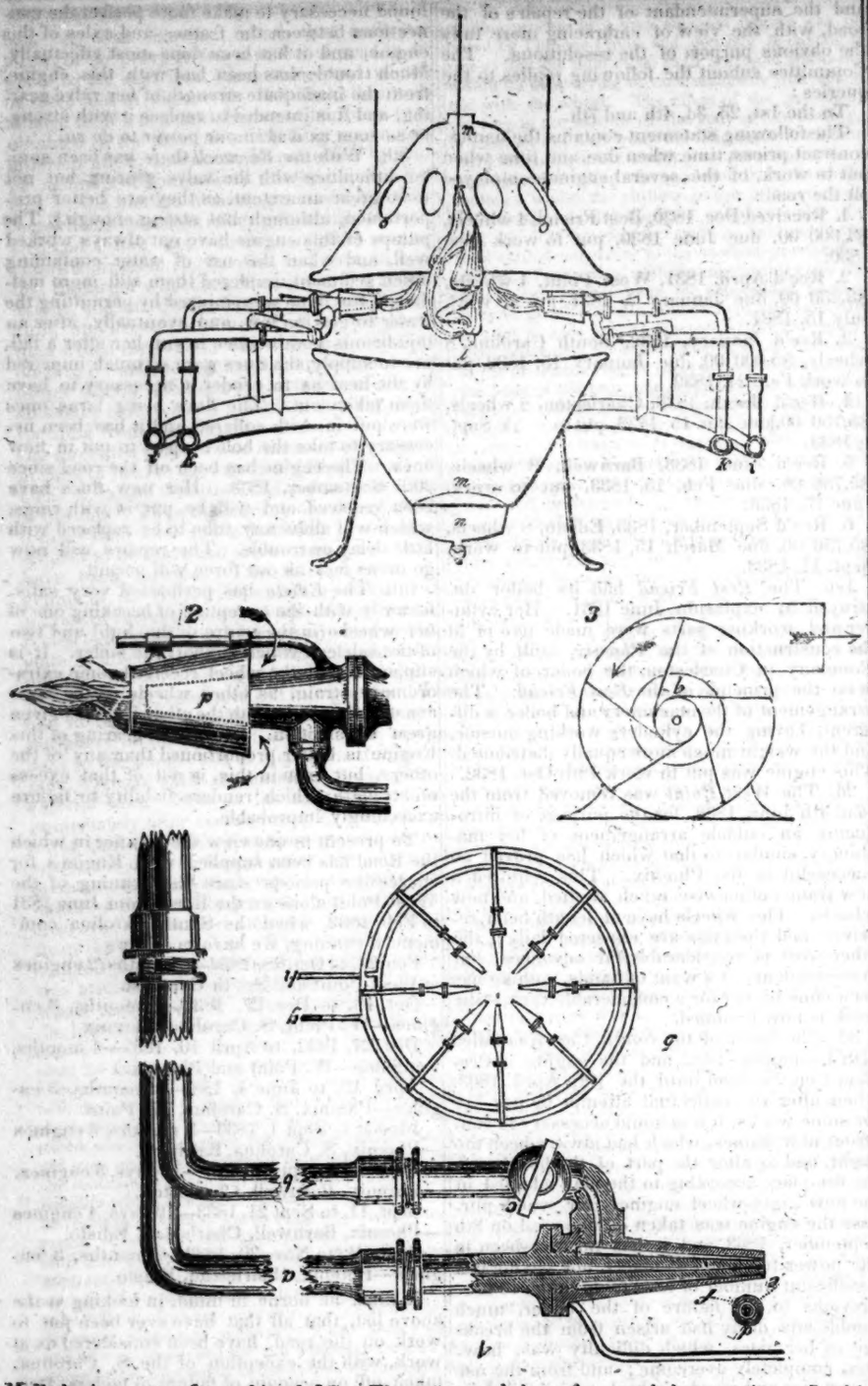
Of West-Point, taken off to introduce new arrangement & frame, June 4, "

Of Barnwell, taken off on account of injury to flues, Sept 21, "

The *Hamburgh*, a four-wheel engine, constructed by the West-Point Foundry Association, according to the plan adopted by them from the one used on the Camden and Amboy road, which are after the approved English engines, with some alteration in her boiler, with a view to a more equal distribution of the weight, was received Oct., 1833, but is not yet put to work as one of the engines on the road, its axle having failed in the first three trials of the engine.

We have thus at work,—The Phœnix, 4 wheels—the Charleston, 8 wheels—the Edisto, 8 wheels.

[*To be continued.*]



Mallet's Apparatus for cooking by Gas Flame.

[From the London Mechanics' Magazine for August.]

We extract from the last part of Mr. Loudon's "Encyclopædia of Cottage, Farm, and Villa Architecture," the following account, by Mr. Mallet, of Dublin, of an apparatus for cooking by gas flame, which he considers superior to that of Mr. Hicks:

"Cooking by gas flame is a thing which has long floated in my head, but which I have said nothing of, lest the folks should suppose me "daft," as they say in your country. Some few years ago I had occasion to make some weldings of iron, where it is an important object that the metal should not be burnt away in the fire; for this purpose I endeavored to use a kind of huge gas blow-pipe. I got one made of the kind shown in fig. 4, as far as each jet is concerned, but of a much larger size. In this figure, *a* is the air tube; *b* is the gas tube; *c* the gas cock; and *d* an end view of the point of the blow-pipe, in which *e* is the circular orifice for the emission of air, and *f* that for the emission of gas. Mr. Daniell of King's College, London, has since published the same thing as new, and of his invention; however, I can establish priority by my laboratory journal. To proceed, the jet or blow-pipe is so made that a current of atmospheric air is forced into the centre of the gas flame, by which means the latter is converted into a blow-pipe of great power. Instead of a mere circle of gas burners I use a certain number of such blow-pipe flames, arranged as radii of a circle, as in fig. 5, in which *g* is the air pipe, and *h* the gas pipe; and each of the branches to the jets from these pipes has four small collars of leather, or stuffing boxes, so that any one can be approached to or drawn from the centre of the circle, or raised or lowered, as occasion may require. Fig. 1 is a sectional view of such an apparatus complete, in action; a circular main tube, *i*, supplies the gas to all, and another, *k*, supplies the current of air, the means for producing which I will describe hereafter. The article to be roasted, *l*, is suspended from a bottle jack, but with a swivel such as those used by anglers interposed, so that it may be permitted to turn, or be stopped, the jack still going on as may be required. Above and below it are parabolic plated copper reflectors, *m m*; the lower one with a receptacle for dripping, *n*; and the upper one with six or eight discs of plate glass inserted in proper places to enable the operator to view the process of coction. Each burner has a copper cone, *p*, placed so as to slide over it, by which means the radiated heat, convergent on the roasting matter, a current of hot air is continually urged against it, as shown more fully in fig. 2. The upper reflector is hung by balance weights, so as to throw up in a moment; and besides a cock to each individual gas tube of each burner, there is a general one to each of the air and gas main tubes, so as to diminish the heat generally, or in any particular spot.

"The advantages of this arrangement over that of Mr. Hicks appear to me to be a much greater economy in fuel, (as the waste heat in the upper reflector may be collected and conveyed away in a tube, and applied for the purpose of heating water, &c.;) perfect combustion, at a greatly increased temperature (viz. one sufficient to melt wrought iron), without any smoke; the means of a more perfect regulati n, application, and adaptation of the heat to any given substance; better form for the reflectors, and less escape of heated air by them; the application of copper funnels to the burners, by which a continuous current of hot air is urged against the article being roasted; and the capability of adapting the cordon of burners to an irregular mass, at equal distances every where.

"The expense of this apparatus is far greater than that of Mr. Hicks, but fewer sets of apparatus will answer by this than by that mode; for the common circle will only suit things of nearly the same size, while my apparatus may be applied to any thing that can be admitted within it.

"The current of air may be produced by means of fanners, such as are occasionally used for producing a blast on a large scale in iron founderies. These are to be worked either by a common jack, (a smoke-jack,) or any other power at hand. The fanners are simply a few vanes of sheet iron, revolving with great rapidity (1500 times per minute) in a cylindrical case, with a lateral aperture for the emission, and two others at the axis for the admission of air, as in fig. 3. The vanes are set tangentially to the axis, and so revolve, that by communicating a centrifugal force to the air in the cylinder, it is expelled at *a* and fresh air drawn in at *b*, to be in its turn expelled likewise. Mr. Daniell proposed to heat the air in a red-hot tube, for the purpose of this blow-pipe, which would certainly be an improvement, and could readily be done by inserting the tube in the kitchen fire.

"Blow-pipe flames for boiling or stewing

may be made on the same principles, and those described, only placed vertically, will do; all that is necessary is that several concentric alternate tubes of gas and air may be burnt. But I do not conceive cooking generally by gas, in the present state of the gas manufacture, and consequent high price of gas, economical. I however esteem it admirably applicable to cooking wild fowl, and similar exquisite *morceaux* of *gourmanderie*. When gas is publicly made from the decomposition of water (and I think the time is not far distant when that will be the case), it will be a cheap fuel for many purposes."

Remarks by Mr. Loudon, Editor of the London Gardeners' Magazine.—"We do not offer an opinion on Mr. Mallet's plan for cooking by gas, as compared with that of Mr. Hicks, but the more we see and hear on the subject generally, the more we are convinced that the time is not far distant that cooking by gas will become common in all towns where gas lighting is employed. Our correspondent, Mr. Robison, informs us that Messrs. Steele, brothers, ironmongers in Edinburgh, are about to erect a kitchen for a gentleman in the neighborhood of that city on the plan given in page 714 of this work, but substituting gas stoves for the coke fires, and adding a roasting and baking oven, both heated by gas. A canopy is to be put up over the cooking hearth, like the sounding board of a pulpit, and its apex is to be connected with a flue in the kitchen wall, by which means all smells produced by cooking will be carried off as fast as generated. Mr. Milne, an eminent brass-founder in Edinburgh, who has had great experience in fitting up gas apparatus, both in England and Scotland, is of opinion that, in the city just mentioned, gas, in the better class of houses, will soon take the place of coal fires, not only for cooking, but also for heating. We have lately seen not only roasting, but boiling and stewing performed at Mr. Hicks', and earthen-ware cones and radiating discs substituted for metallic ones, in a similar manner to that suggested by Mr. Mallet. For broiling, a disc is substituted for a cone."

Six Years Rotation of Crops, and its Results. By Wm. Taylor. [For the New-York Farmer and American Gardener's Magazine.]

Mr. Fleet,—I have often thought if farmers would, more frequently, give an interchange of their views and practice in agricultural pursuits, through the medium of your excellent Magazine, the brotherhood would receive many advantages and useful hints; and being fully satisfied that I have received (even in a pecuniary point of view) more than the principal and interest on the three dollars I sent you for the New-York Farmer, as also many mental feasts, on rainy days and evenings, from its pages, besides the many useful hints my wife and daughters have received, which have added not a little to our comfort and happiness, I feel an obligation resting on me, although entirely unaccustomed to writing for the public eye, to attempt to contribute my feeble part in so good a cause.

The most of my neighbors around me still continue the old system of summer-fallowing and ploughing, two, three or four times for every crop, which is usually much less than might be obtained, with judicious management, with once ploughing only, and save the loss of much labor, team, and wear and tear, and use of land by summer fallowing, (which ought to be exploded,) but also the great loss of the fermentation of the sod and other substances, which might otherwise be the best of food for the grain crop. I feel impelled, by a sense of duty, to send you an account of what I consider the great advantages of the Six Years Rotation System of Crops, and only once ploughing for any crop. I have pursued it for many years, and, if it was generally adopted in this great empire state, I am convinced it would make a clear gain annually of $50,000.

From my early days I have been accustomed to agriculture, and, when a boy, would frequently ask many questions of my father, (whose memory I revere,) if such and such methods of farming would not be better than the old system. As my questions were frequent, and had, probably, become rather troublesome, he gave me, for a general answer, to note down such plans as my own brain would suggest, as an improvement, and if I lived to become a man, I could then put them in practice, and ascertain their utility.

The first of all my plans was to clear the ground of stumps and stones, and if it was but one acre a year that could be added, to let that be *well* done; for it is an important point, ever to be borne in mind by the farmer, after he determines to do a thing, that it be *well* done.

I then begin my six years rotation of crops with Indian corn and potatoes. I spread my manure in the spring of the year, in its long unfermented state, from the barn yard, on the sod, before the plough, then smoothly invert the sod, at the depth of 4½ inches, following with the roller, and then with St. John's double harrow effectually lengthwise. I, then, with a simple machine, mark out two or three rows at a time, going through both ways, from two feet ten inches to three feet apart, plant the deep grain long-eared eight-rowed corn, get from thirty to ninety bushels shelled corn per acre, averaging only about forty-five or fifty, because much of it has no other manure than gypsum and the fermentation of the sod. My method of cultivating the corn crop is very similar to that excellent communication made by Jesse Buel, Esq. in your New-York Farmer, page 147. Cost of preparing the ground and tilling the corn, is $8 per acre; the stalks will pay for harvesting the corn.

The second year I plough my stalk ground in April into fifteen pace lands, sow barley, peas or oats, and harrow lengthwise first, then crosswise. If the weather is dry, and there are any lumps, pass the roller over, and open the dead furrows with the plough. Crop of oats average 45 bushels, barley 25, peas 15. Cost of tilling $4 per annum.

Third crop. As soon as the hogs have cleared the stubble of grain, I turn the stubble all smoothly under, about four inches deep, leaving the dead furrow where the ridge was in the last crop; and between the 15th and 20th of September I spread a light coat of manure over the lands as they have been ploughed, and follow immediately with the seed, 1½ bushel to the acre, it having been previously steeped in brine of common salt twelve hours, then four quarts of lime well stirred up amongst a bushel of wheat, and then add five or six quarts of gypsum finely ground.

In this way of preparing seed I have not had smutty wheat in twenty years, and very seldom troubled with rust. The double harrow follows hard after the sower (lengthwise of the furrow of course,) covering the seed, and mixing the manure with the earth, before it has time to dry or waste with the wind or sun; cross harrow as before; pass over the roller, open the dead furrows, and otherwise ditch, if necessary, so that the water, in the spring of the year, will run off readily. Crop of wheat from ten to thirty bushels per acre; average eighteen or twenty; cost of tilling and carting out manure, $6 per acre. Early in March sow on the wheat twelve quarts of timothy seed, and four quarts of red clover seed, to the acre. Early in May sow a bushel of gypsum, and at wheat harvest the clover and timothy will, ordinarily, be a beautiful green rich verdure, an ell high, that would make a man smile if his head ached ever so bad. It may be pastured considerably, but not too late in the season.

Fourth year. Mow from two to three tons of hay per acre, average two and a half. Fall feed will nearly pay for cutting and securing the hay.

Fifth year. Mow again, average two tons. The fall feed again pays all expenses.

Sixth year. In May sow one bushel of gypsum per acre, and pasture the whole summer; it will afford a rich pasture, equal to two tons of hay, and be much better for the corn crops, which, the next year, will again commence the rotation, than if the ground had been mown the last of the six years rotation.

Perhaps I ought to give you a statement of my success, from year to year, in pursuing the course I so earnestly recommend; for it is a common remark among farmers, that the practical result is every thing.

The fifty acres I began with was a gift from my father, worth $800. The timber was chiefly removed from forty acres of it. The old system of ploughing three or four times for every crop being in practice, and the stones not having been removed, much of the soil was exhausted by hard cropping. As I became able I purchased several small farms adjoining, at twenty four or twenty-five dollars per acre, brought them under the above method of tillage, and have now a farm of nearly 300 acres, 215 of it improved, lying together, which would now command about $40 per acre, and which yearly gives the following results.

Products of 215 acres of improved land, lying on the line between Ballston and Charlton, part in each town—being for the year 1833:

Wheat,	280	bushels at	8s. 6d.	$297	50
Oats,	547	-	3 0	205	00
Peas,	55	-	5 6	37	81
Rye,	20	-	6 0	22	50
Wool,	658	lbs.	4 0	329	00
62 Sheep, being the increase of the flock, at			16 0	124	00
600 lbs. of Butter, and 240 lbs. Cheese,				105	00
Pork, 4000 lbs. at 5 cents,			-	220	00
Beef, 2500 lbs. at 3½ "			-	87	50
Corn, 624 bushels at 4s.			-	312	00
Potatoes, 600 bushels at 17 cents,				102	00
Cider, 50 barrels at 8s.			-	50	00
Winter Apples, 50 bushels,			-	12	00
5 Veal Calves, at 20s.			-	12	50
Poultry and Eggs,			-	5	00
Rent of three out-dwelling-houses on the farm,			-	73	00
Rent of chief mansion-house, &c.				100	00
				2182	81

Growth of colts will pay for the team.

Deduct for expenses below	858 62
Clear gain	$1324 19

Expended for feed, labor, seed, wear and tear, &c. as follows:

208 bushels corn, fed to pork and beef, at 4s.	$104 00
400 bushels potatoes to do. and other stock, at 17 cents,	68 00
200 bushels oats, fed to team and stock, at 3s.	93 75
24 bushels seed wheat, at 10s.	30 00
35 bushels seed oats, at 3s.	13 12
7 bushels seed peas, and 2 of rye, at 6s.	6 75
Seed corn, and plaster or gypsum,	15 00
Wear and tear, including mechanics' work,	60 00
Labor, one man at 16 dollars per month, as principal,	192 00
Two men at 14 dollars per month, for seven months each	196 00
Two boys at 30 dollars each, the summer,	60 00
Taxes	20 00
Total Expenses	$858 62

The hands all board themselves.

The clear gain is more than 15 per cent, calling all the improved land $40 per acre. The growth of the timber land will, at least, be 7 per cent. at the same price per acre.

Let no farmer, or farmer's son, rise from the perusal of the above plain and unvarnished statement, and say he is

> "Doom'd to tread the thorny ground.
> Where few, he fears, are happy found."

But let him feel and act as if agriculture, managed with system, and true economy, is the most profitable, most healthy, most honorable, and best calculated to raise our thoughts and aspirations of praise to that beneficent being who gives us wisdom to cast in the "appointed wheat, and vetches, and barley, in its place;" and let us honorably sustain the cause, by faithfully doing our duty, and we and ours will be blessed, and happy.

P. S.—Forgive the egotism, for one can scarcely speak of his own doings without it. A similar statement for the year 1832 lacks only $9 87 of being 15 per cent at $40 per acre. Respectfully, yours,

W. Taylor.

Charlton, Saratoga Co.
Oct. 25, 1833.

Remarks.—We are much pleased with the above communication, and hope we shall be favored with many similar to it.—[Ed.]

Recipe for Preserving Beef and Hams. By Carlo. [From the New-York Farmer.]

Mr. Fleet:—Take 12 lbs. of common salt, 4 oz. saltpetre, 1½ gallons molasses, or 12 lbs. coarse sugar, and six gallons water—mix intimately, and apply cold to one barrel of beef or hams.

This recipe is said to have been brought from Ireland about one hundred years ago, and has been in use ever since, for curing beef, smoked beef, and hams. It preserves the meat moist, and not over salt; and beef cured by it, after lying eight months in the pickle, has made good soup, having plenty of gelatin. The smoked beef never gets hard and bony, and the hams preserve much of their gelatin. The pickle, however, if kep till warm weather, should be drawn off, scalded and skimmed; 4 lbs. of salt, 1 oz. of saltpetre, and 1 gallon water added, and returned when cold.

In packing the beef, it should be cut in pieces not less than four, nor more than ten pounds, rubbed well with salt, and packed close in the barrel without any salt between the layers, and the pickle put on.

Yours, &c. Carlo.

November 16th, 1833.

Babbage on the Economy of Manufactures.

(Continued from page 696.)

315. The principal part of the hand-machines employed in the bobbin-net manufacture are worked in shops forming part of or attached to private houses. The subjoined list will show the kinds of machinery employed, and classes of persons to whom it belongs.

Bobbin-net Machinery now at work in the Kingdom:

Hand Levers—six-quarter, 500; seven-quarter, 200; eight-quarter, 300; ten-quarter, 300; twelve-quarter, 30; sixteen-quarter, 20; twenty-quarter, 1. Total, 1,351.

Hand Rotary—ten-quarter, 50; twelve-quarter, 50. Total, 100.

Hand Circulars—six-quarter, 100; seven-quarter, 300; eight-quarter, 400; nine-quarter, 100; ten-quarter, 300; twelve-quarter, 100. Total, 1300.

Hand Traverser, Pusher, Straight Bolt, &c. averaging five-quarters, 750.

Total, hand machines, 3501.

Power—six-quarter, 100; seven-quarter, 40; eight-quarter, 350; ten-quarter, 270; twelve-quarter, 220; sixteen-quarter, 20. Total, power machines, 4000.

Total number of Machines, 4501.

700 persons own, each, 1 machine; 226, 2 do.; 181, 3 do.; 96, 4 do.; 40, 5 do.; 21, 6 do.; 17, 7 do.; 19, 8 do.; 17, 9 do.; 12, 10 do.; 8, 11 do.; 6, 12 do.; 5, 13 do.; 5, 14 do.; 4, 16 do.; and 25 own 1192, or respectively 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 35, 36, 37, 50, 60, 68, 70, 75, 95, 105, 206. Total number of owners, 1382, holding together 4500 machines.

The hand workmen consist of the above named owners, 1000; and of journeymen and apprentices, 4000. Total, 5000.

These machines are distributed as follows:—Nottingham, 1240; New Radford, 140; Old Radford and Bloomsgrove, 240; Ison Green, 160; Beeston and Chilwell, 130; New and Old Snenton, 180; Derby and its vicinity, 185; Loughborough and its vicinity, 385; Leicester, 95; Mansfield, 85; Tiverton, 220; Barnstable, 180; Chard, 190; Isle of Wight, 80; in sundry other places, 990. Total, 4500.

"Of the above owners, one thousand work in their own machines, and enter into the class of journeymen as well as that of masters in operating on the rate of wages. If they reduce the price of their goods in the market they reduce their own wages first; and, of course, eventually the rate of wages throughout the trade. It is a very lamentable fact, that one-half, or more, of the one thousand one hundred persons specified in the list as owning one, two, and three machines, have been compelled to mortgage their machines for more than their worth in the market, and are in many cases totally insolvent. This has chiefly arisen from the fall in prices of nets beyond the reduction in the prices of cotton and wages. This class of persons having become indebted to the cotton merchant, have been compelled to pay a comparatively excessive price for the thread they have used, and to sell their goods at the lowest prices of the market. Besides, their machines are principally narrow, and making short pieces, while the absurd system of bleaching, at so much a piece, goods of all lengths and widths, and dressing at so much all widths, has caused the new machines to be all wide, and capable of producing long pieces; of course to the serious disadvantage, if not utter ruin, of the small owner of narrow machines.

It has been observed above, that wages have been reduced, say 25 per cent. in the last two years, or from 24*s.* to 18*s.* a week. Machines have increased in the same time one-eighth in number, or from four thousand to four thousand five hundred, and one-sixth in capacity of production. It is deserving the serious notice of all proprietors of existing machines, that machines are now introducing into the trade of such power of production as must still, more than ever, depreciate (in the absence of an immensely increased demand) the value of their property, have a direct tendency to sink the small owners into journeymen, and either greatly increase the labor, or depreciate the workman's wages. It is a curious fact, as illustrative of the progress of machinery, that there are bobbin-net machines, which being worked by three men, six hours each, or eighteen hours per day, are turning off twenty thousand square yards of good net per annum. Now, it is not to be fairly denied, that such machines being multiplied to some extent, must, with only the actual demand, lower even the present trifling value of the sixteen hundred or seventeen hundred narrow hand-machines, one-half or more, and reduce the rate of wages of those who work in them one-third, and that of the remaining hand-machine workmen at least one-fourth; or, which is the same thing, compel them to increase their labor in the same proportion.

316. From this abstract, we may form some judgment of the importance of the bobbin-net trade. But the extent to which it bids fair to be carried in future, when the eastern markets shall be more open to our industry, may be conjectured from the fact which Mr. Felkin subsequently states, that "We can export a durable and elegant article in cotton bobbin-net, at 4*d.* per square yard, proper for certain useful and ornamental purposes, as curtains, &c.; and another article used for many purposes in female dress at 6*d.* the square yard."

317. *Of Patents.*—In order to encourage the importation, the improvement, or the invention of machines, and discoveries relating to manufactures, it has been the practice in many countries to grant, to the first introducers, an exclusive privilege for a term of years. Such monopolies are termed Patents; and they are granted, on the payment of certain fees, for different periods, from five to twenty years.

The following table, compiled from the report of the Committee of the House of Commons "*On Patents*," 1829, shows the expense and duration of patents in various countries:

Countries.	Expense. £	s.	d.	Term of Years.	Number granted in 6 years, end'g 1826–*Rep.* p. 243.
England	120	0	0	14	914
Ireland	125	0	0	14	..
Scotland	100	0	0	14	..
America	6	15	0	14	..
France	12	0	0	5	1091
	32	0	0	10	
	60	0	0	15	
Netherlands	£6 to £30			5, 10, 15	..
Austria	42	10	0	15	1099
Spain*—Inventor	20	9	4	15	..
" Improver	12	5	7	10	..
Importer	10	4	8	6	..

318. It is clearly of importance to preserve to each inventor the sole use of his invention, until he shall have been amply repaid for the risk and expense to which he has been exposed, as well as for the talent he has exerted. But the varieties in the degree of merit are so numerous, and the difficulties of legislating upon the subject are so great, that it has been found almost impossible to frame a law which shall not, practically, be open to the most serious objections.

The difficulty of defending an English patent in any judicial trial is very great; and the number of instances on record in which the defence has succeeded, are comparatively few. This circumstance has induced some manu-

* The expense of a patent in Spain is stated in the Report to be respectively 2000, 1200, and 1000 reals. If these are reals of *Vellon*, in which accounts are usually kept at Madrid, the above sums are correct; but if they are reals of *Plate*, the above sums ought to be nearly doubled.

facturers no longer to regard a patent as a privilege by which a monopoly price may be secured; but they sell the patent article at such a price as will merely produce the ordinary profits of capital, and thus secure to themselves the fabrication of it, because no competitors can derive a profit from evading a patent so exercised.

319. The law of copyright is, in some measure, allied to that of patents; and it is curious to observe, that those species of property which require the highest talent, and the greatest cultivation—which are, more than any other, the pure creations of mind,—should have been the latest to be recognized by the state. Fortunately, the means of deciding on an infringement of property in regard to a literary production, are not by any means difficult; but the present law is, in some cases, productive of considerable hardship, as well as impediment to the advancement of knowledge.

320. Whilst discussing the general expediency of limitations and restrictions, it may be desirable to point out one which seems to promise advantage, although it is by no means free from grave objections. The question of permitting by law, partnerships, in which the responsibility of one or more of the partners is limited in amount, is peculiarly important in a manufacturing, as well as a commercial point of view. In the former light, it appears calculated to aid that division of labor, which we have already proved to be as advantageous in mental as it is in bodily operation; and it might possibly give rise to a more advantageous distribution of talent, and its combinations, than at present exists. There are in this country many persons possessed of moderate capital, not themselves enjoying the power of invention in the mechanical and chemical arts, but who are tolerable judges of such inventions, and who are also excellent judges of human character. Such persons might, with great success, employ themselves in finding out inventive workmen, whose want of capital prevents them from realizing their projects. If they could enter into a limited partnership with persons so circumstanced, they might restrain within proper bounds the imagination of the inventor, and by supplying capital to judicious schemes, render a service to the country, and secure a profit for themselves.

321. Amongst the restrictions intended for the general benefit of our manufactures, there existed one by which workmen were forbidden to go out of the country. A law so completely at variance with every principle of liberty ought never to have been enacted. It was not, however, until experience had convinced the legislature of its inefficiency, that it was repealed. When, after the last war, the renewed intercourse between England and the continent became extensive, it was soon found that it was impossible to discover the various disguises which the workmen could assume; and the effect of the law was rather, by the fear of punishment, to deter those who had left the country from returning, than to check their disposition to migrate.

ON THE EXPORTATION OF MACHINERY.

322. A few years only have elapsed since our workmen were not merely prohibited by act of Parliament from transporting themselves to countries in which their industry would produce for them higher wages, but it was forbidden to export the greater part of the machinery which they were employed to manufacture at home. The reason assigned for this prohibition was the apprehension that foreigners might avail themselves of our improved machinery, and thus compete with our manufacturers. It was, in fact, a sacrifice of the interests of one class of persons, the makers of machinery, for that of another class, those who use it. Now, independently of the impolicy of interfering unnecessarily between these two classes, it may be observed, that the first class, or the makers of machinery, are, as a body, far more intelligent than those who only use it; and although, at present, they are not nearly so numerous, yet, when the removal of the prohibition which cramps their ingenuity shall have had time to operate, there appears good reason to believe that their numbers will be greatly increased; and that it may, in time, surpass that of those who use machinery.

323. The advocates of these prohibitions seem to rely greatly upon the possibility of preventing the knowledge of new contrivances being conveyed from one country to another; and they appear to take much too limited a view of the possible, and even probable, improvements in mechanics. For the purpose of examining the question, let us consider the case of two manufacturers of the same article, one situated in a country in which labor is very cheap, the machinery bad, and the modes of transport slow and expensive; the other engaged in manufacturing in a country in which the price of labor is very high, the machinery excellent, and the means of transport expeditious and economical. Let them both send their produce to the same market, and let each receive such a price as shall give to him the profit ordinarily produced by capital in his own country. It is almost certain that in such circumstances the first improvement in machinery will occur in the country which is most advanced in civilization; because, even admitting that the ingenuity to contrive were the same in the two countries, the means of execution are very different. The effect of improved machinery in the rich country will be perceived in the common market, by a small fall in the price of the manufactured article. This will be the first intimation to the manufacturer of the poor country, who will endeavor to meet the diminution in the selling price of his article by increased industry and economy in his factory; but he will soon find that this remedy is temporary, and that the market price continues to fall. He will thus be induced to examine the rival fabric, in order to detect from its structure any improved mode of making it. If, as would most usually happen, he should be unsuccessful in this attempt, he will be forced to endeavor to contrive some improvement in his machinery, or to acquire information respecting that which has taken place in the factories of the richer country. Perhaps, after an ineffectual attempt to attain by letters the information he requires, he sets out to visit the factories of his rivals. To a foreigner and rival manufacturer such establishments are not easily accessible; and the more recent the improvement, the less likely he will be to gain access to them. His next step, therefore, will be to obtain the knowledge he is in search of from the workmen employed in using or making the machines. Without *drawings*, or an examination of the *machines* themselves, this process will be slow and tedious; and he will be liable after all to be deceived by artful and designing workmen, and be exposed to many chances of failure. But suppose he returns to his own country with perfect drawings and instructions, he must then begin to construct his improved machines: and these he cannot execute either so cheaply or so well as his rivals in the richer country; but after the lapse of some time, we shall suppose them to be completed and in working order.

Let us now consider what will have occurred to the manufacturer in the rich country. He will, in the first instance, have realized a profit by supplying the home market, at the usual price, with an article which it costs him less to produce; he will then reduce the price both in the home and foreign market, in order to produce a more extended sale. It is in this stage that the manufacturer in the poor country first feels the effect of the competition; and if we suppose that, from the first application of the new improvement in the rich country, and the commencement of its employment in the poor country, only two or three years elapse, yet will the manufacturer who contrived the improvement, even supposing that during the whole of this time he has made only one step, have realized so large a portion of the outlay which it rendered necessary, that he will now be in a state to make a much greater reduction in the price of his produce, and thus render the gains of his rivals quite inferior to those which his own ingenuity has produced for himself.

324. It is contended, that, by admitting the exportation of machinery, foreign manufacturers will be supplied with machines equal to our own. Now, the first answer to this argument which presents itself is supplied by almost the whole of the present volume, viz.: *That in order to succeed in a manufacture, it is necessary not merely to possess good machinery, but that the domestic economy of the factory should be most carefully regulated.*

The truth, as well as the importance of this principle, is so well established in the Report of a Committee of the House of Commons, "On the Export of Tools and Machinery," that I shall avail myself of the opinions and evidence there stated, before I offer any observations of my own:

"Supposing, indeed, that the same machinery which is used in England could be obtained on the continent, it is the opinion of some of the most intelligent of the witnesses that a want of arrangement in foreign manufactories, of division of labor in their work, of skill and perseverance in their workmen, and of enterprize in the masters, together with the comparatively low estimation in which the master-manufacturers are held on the continent, and with the comparative want of capital, and of many other advantageous circumstances detailed in the evidence, would prevent foreigners from interfering in any great degree by competition with our principal manufacturers; on which subject the committee submit the following evidence as worthy the attention of the House:

'I would ask whether, upon the whole, you consider any danger likely to arise to our manufactures from competition, even if the French were supplied with machinery equally good and cheap as our own?—They will always be behind us until their general habits approximate to ours; and they must be behind us for many reasons that I have before given.

'Why must they be behind us?—One other reason is, that a cotton manufacturer, who left Manchester seven years ago, would be driven out of the market by the men who are now living in it, provided his knowledge had not kept pace with those who have been, during that time, constantly profiting by the progressive improvements that have taken place in that period: this progressive knowledge and experience is our great power and advantage.'

"It should also be observed, that the constant, nay, almost daily, improvements which take place in our machinery itself, as well as in the mode of its application, require that all those means and advantages alluded to above should be in constant operation; and that, in the opinion of several of the witnesses, although Europe were possessed of every tool now used in the United Kingdom, along with the assistance of English artisans, which she may have in any number, yet, from the natural and acquired advantages possessed by this country, the manufacturers of the United Kingdom would for ages continue to retain the superiority they now enjoy. It is, indeed, the opinion of many that, if the exportation of machinery were permitted, the exportation would often consist of those tools and machines, which, although already superseded by new inventions, still continue to be employed, from want of opportunity to get rid of them—to the detriment, in many instances, of the trade and manufactures of the country; and it is matter worthy of consideration, and fully borne out by the evidence, that by such increased foreign demand for machinery, the ingenuity and skill of our workmen would have greater scope; and that, important as the improvements in machinery have lately been, they might, under such circumstances, be fairly expected to increase to a degree beyond all precedent.

(To be concluded in our next.)

NEW-YORK AMERICAN.

DECEMBER 7, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20—1833.

LITERARY NOTICES.

WALDEMAR, a Tale of the Thirty Years War, by W. HARRISON; 1 vol.; *Philadelphia*, CAREY, LEA & BLANCHARD.—Another of Leigh Ritchie's Library of Romance; but not one calculated to add much to the reputation of the series. If this tale of the Thirty Years War be indeed from the same hand as "The Diary of a Physician," that hand has lost much of its cunning. There is a poverty and barrenness of invention, and Munchausen degree of improbability in the incidents of the story, which are inadequately redeemed by occasional passages of strength and beauty. Not the least valuable part of the book, are the historical sketches of Tilly, Pappenheim, Wallestein, and others, thrown into an appendix.

TRADITIONARY STORIES AND LEGENDARY ILLUSTRATIONS, by ANDREW PICKEN, author of the Dominie's Legacy; 1 vol.; *Philadelphia*, ED. C. MIELER.—This volume is made up of two distinct stories, each one intended, and in our judgment well calculated, to illustrate, by practical results, a useful moral. On the whole we prefer, perhaps, the second and longer story, *The Priors of Lawford*, which is wrought out with great and painful interest and effect. From the shorter story, *Lady Barbara of Carloghie*, intended to exemplify the evil of ill assorted macthes, we had marked an extract, which would fully justify our praise of this volume; but the demands of this busy political season, force us to exclude it—at least for to-day.

THE DUCHESS OF BERRI IN LA VENDEE, by GENERAL DERMONCOURT; 1 vol.: *Philadelphia*, CAREY, LEA & BLANCHARD.—Madame *Luchesi Palli* has certainly very much disenchanted the adventures of the Duchess of Berri, by teaching the world to overlook the daring of the heroine, in the frailties of the woman. Yet the courage, the fortitude, and the cheerful and confident spirit with which this slight and delicate Princess—whom even the breath of Heaven had not been permitted before to visit too roughly—encountered and overcame the greatest exposure, hardships and perils, in her absurd and illjudged, but daring attempt to rouse La Vendee into insurrection, are fitted to call forth wonder and admiration. They are recorded, too, with accuracy and fidelity by an enemy; for her biographer in this instance, is the General of Louis Philippe, who commanded in the district and succeeded in capturing her. He has made of it an attractive story.

THE SKETCH BOOK OF FASHION, by the author of Mother and Daughter. 2 vols. *New York:* HARPER & BROTHERS.—A collection of stories, which the author calls "laughing satires," but which sometimes have a very cynical laugh, is here presented; intended to point out, and by pointing out to correct, some peculiar vices of the higher class of society in England. They are written with ease, with spirit, and frequently more with a caustic, than a sportive pen. We are so pressed however, for room, at this moment—fraught as it is with even more than the usual supply of speeches, reports, and counter reports—that we have no room for any extracts.

THE LITTLE RECKONER, by RICHARD W. GREEN. *New York:* MCELRATH, BANGS & CO.

PETER PARLEY'S ARITHMETIC, with Engravings. *Boston:* CARTER, HENDEE & CO.

Both these little school books aim at facilitating the usually repulsive study of arithmetic to beginners. The first is intended for children younger than those to whom "Colburn's first lessons" are intelligible, and begins with the very a, b, c, as it were of mental arithmetic. *Peter Parley*, in addition to the simplicity with which he inculcates each lesson, presents it in the form of a story, which in its turn is illustrated by a picture, thus seeking to make this study an amusement. Both make use of familiar objects in order to impress the mind through the eye with the value and relation of numbers—as for instance, three beans, four hats, six stars, &c. &c. Of the two books, that of *Peter Parley* is, from the form in which the lesson is conveyed, and from the engravings by aid of which it is more forcibly impressed, to be preferred.

Q. HORATII POEMATA, with Notes and Explanations; by CHAS. ANTHON, Jay Professor in Columbia College. 1 vol. 8vo. *New York:* G. & C. & H. CARVILL.—Professor Anthon published in 1830, an edition of Horace, in which the notes, critical dissertations, conjectural amendments, and historical illustrations,—learned far beyond the ordinary reach or demand of American scholarship—swelled the work to a size that rendered it both too dear and too large for ordinary use. In the edition before us, we have the same carefully printed text, with a large body of notes, thrown into an appendix, and which embrace those topics only connected with the poetry of Horace, which are essential to the proper understanding and enjoyment of it. All that relates to metre, and such explanations as serve to remove difficulties in the allusions, and indeed structure, of these poems, are carefully preserved, so as to render this edition a very useful and valuable one to all learners, as well as to those who, having learned, preserve the taste, and sometimes find the occasion to look back with pleasure at a school book.

SCENES OF AMERICAN WEALTH AND INDUSTRY. Boston: ALLEN & TICKNOR.—This is really a very pretty picture book with a great deal of useful information about our own country, its manufactures, trade, and agriculture, well calculated both to amuse and instruct youth. Taking each State in succession, the employments and occupations peculiar to, or chiefly followed in, that State, are explained; with many engravings, representing now some process of manufacture, now of agriculture; sometimes the view of a town, as Pittsburgh and Cincinnati; sometimes of scenes in the far West. After going through the States, there are several chapters devoted to Mexico and South America, prepared with equal care and accuracy. It is a little book quite calculated to stimulate and enlighten the curiosity of youth.

LETTERS OF MAJOR JACK DOWNING. *Boston.*—A friend thus writes to us concerning this publication:

We have run over the pages of this book with a considerable share of amusement; but we must confess our disappointment at not meeting in it various letters of the Major, to which alone we were first indebted for a knowledge of and attachment to his character and writings. We find, on tracing dates, that this distinguished personage was a writer of no inconsiderable power in his own State for two or three years before we ever heard of him. This was entirely owing to his writings being of almost an exclusively local character, but not the less meritorious. But when he joined the "Gineral" on the *grand tour*, we began to recognize him as a public character of no little importance. His letters then met us in the columns of the New York Daily Advertiser, and carried with them such palpable evidences of identity, we could not for a moment doubt their being from the "*genewine critur*," and we discarded all others.

The Boston publisher, it seems, in the Appendix to the book, embraces some of the letters which originally appeared in the New York Daily Advertiser, and which are said to be letters the Major never wrote. The Major, however, contradicted this some time ago; and we are inclined to side with him, and believe that he wrote all the letters published under his name in the New York Daily Advertiser, and which, with the Major's permission, we pronounce his best. And we repeat our belief, and the Boston book will, we think, bear us out in the remark, that but for the Major's letters, published originally in the New York Daily Advertiser, and republished with the greatest avidity in almost every newspaper in the country, the Major would not have been by any means recognized as he now is, as one of the first confidential advisers that ever stood between a people and their ruler. The Major is evidently a favorite of the people, and by his own showing (in which we trust he is not mistaken); he stands unrivalled in the estimation of the President; and has so ingeniously placed himself as to defy any power, Legislative, Executive or Judicial, to oust him from his position.

JOURNAL AND LETTERS FROM FRANCE AND GREAT BRITAIN BY EMMA WILLARD. 1 vol. *Troy, N. Y. N. Tuttle. New York, John Leavitt.* Originally written for a private circle and not intended for publication, this Journal is, nevertheless, now sent forth to the world from motives of philanthropy; to aid by any profits derived from the sale of it, the cause of female education in Greece. This consideration, and the fact, that the Journal is from the pen of a lady who has done good service herself, to the cause of female education at home, entitle the work as much to the indulgence, as to the patronage of the public. It is not, therefore, with the view of disparaging the book, but rather for the purpose of making it the occasion of stating some general propositions as to what seem to us among the first duties of a tourist, that we shall now tax the attention of our readers by a few remarks.

In assuming to judge of a foreign country, foreign in its language, usages, religion, and laws, such as France is to the great mass of Americans, there is always great danger of adopting hasty conclusions by reason of the false medium which we look through. Owing to the identity of our language and that of England, our reading, respecting other countries, is in English books; from them we derive not facts alone, but opinions, prepossessions, prejudices. We look in short at the rest of Europe, and of the world, indeed, through English glasses, which, like those tha *Major Jack Downing* supposes to have been furnished "to our venerable President" by a distinguished political Seer, present all objects, not as they really are, but as it is the interest of the spectacle maker, that they should appear. Hence it seems to us specially obligatory on an American visiting France, to distrust first impressions, to keep perpetual guard upon the prejudices, which the striking difference in all the modes of living in that country from those he is accustomed to see at home, so readily excites, and particularly to avoid generalizing from isolated facts or occurrences. In these points we think the writer of this Journal, has been incautious; her judgment is too soon made up, and her opinions emitted with two little examination and qualification; she passes upon the scenery, and we believe, agriculture of France, as compared with those at home, by the time she leaves Rouen, on the road from Havre to Paris. She pronounces upon the morals of French society, after a few weeks residence in Paris, and herself speaking the language of the country, as she apprizes us, imperfectly. Thi can only be accounted for, as we apprehend, on the hypothesis of certain preconceived notions about French people and French habits, derived, as above intimated, possibly from English books; hence those appearances only were noted which seemed to tally with such notions, and thus all objects were in a measure prejudged. Now on the score of the domestic relations in France, concerning which, we have heard and read so many flippant things (we do not apply these expressions to the Journal now before us) from English and American tourists, who make up their opinions from what they see or hear in Paris, we may from a residence of some years at different periods of life in France, claim to speak with knowledge, when we say, that in no country in the world, so far as we know, is the intercourse between parents and children, husband and wife, brothers and sisters, masters and servants, and between neighbor and neighbor without reference to rank or fortune, on a more delightful or affectionate footing than in France. The very terms of the language, the endearing *tutoiment*, (using the second person singu-

lar instead of the second person plural,) which always obtains in the domestic circle, both towards relatives and family servants; the claim which one's neighbor, *mon voisin*, has almost as a matter of course to general kindness, and to aid, if necessary, the devoted attachment of children to parents, and the confidential footing of equality upon which they live together: all this belongs eminently to domestic relations in France; and knowing such to be the case, it is always with regret, and sometimes with indignation, that we read sweeping and indiscriminate censures levelled against the moral condition of French society, and founded—if founded at all—upon the licentious exceptions which every great city, and probably Paris, from its being the European metropolis, more than any other, presents.

We do not make these remarks now, because we consider that Mrs. Willard has, more than others, fallen into the error of these general, and therefore unjust, conclusions; but because, from the merited influence of her name, we feared that what she does say on these subjects would have greater weight than the more erroneous but less considered assertions of others; and therefore we desired to put our readers at least upon their guard.

Boys and Girls' Library of Useful Knowledge, Vol. XVIII. New York: Harper & Brothers.—We have here Part III of Sunday Evenings; or an Easy Introduction to the reading of the Bible. In these pages the stories of the Bible are told separately, and in detail. There are also engravings representing some of the striking incidents of each, all calculated to fix the young reader's attention.

The Child's Annual. Boston: Allen & Ticknor.—This is a really pretty and useful little volume, adapted to young readers, and with wood-cuts scarcely inferior to engravings. The contents are varied and instructive, partly original and partly selected; and such as may be read with amusements and advantage.

A Volume from the Life of Herbert Barclay. Baltimore: Wm. & Jos. Neale.—A fairly printed volume, in fine large type, is a temptation in itself; and one that, in the rage for condensing now so prevalent, is somewhat rare. Thus induced, we cheerfully read through these pages; and find in them much good sense conveyed in rather ambitious style, and with a sad itching after figurative and rotund periods. There is nothing that is very original, and a good deal that is dull and commonplace, in the views here given of society, and of the course and feelings of a young man, such as Herbert Barclay is represented: yet, upon the whole, the tone and tendency of the book are good. It is, too, an American book, and treats of American society.

The Note-Book of a Country Clergyman. New York: Harper & Brothers.—A reprint, we take it, from the context, of an English book. The stories are sad, and like enough to reality to pass for truth; yet they want the freshness and impress of life, which distinguish those of "Scenes in our Parish;" which, in their general character, nevertheless, and in the moral and religious lessons they inculcate, they resemble. To the story of the Confession, however, we object, as all but incredible in the main incident upon which it turns.

Works of Miss Edgeworth, Vol. IX. *New York:* Harper & Brothers.—With this volume the series of Miss Edgeworth's admirable Tales and Novels is completed, and it is only just to the publishers to say, that in thus giving to us an edition cheap and handsome in a remarkable degree—*nine* large and well printed octavo volumes for *six* dollars—they have entitled themselves to a liberal patronage. It has been well suggested that as "holiday presents," few books of the sort could be more judiciously presented.

Illustrations of Political Economy, by Harriet Martineau, Nos. I. to VIII. *Philadelphia*, E. Littell.—We have already, on several occasions, borne our testimony so strongly to the talent and the tact with which Miss Martineau succeeds in imparting to a naturally *dry* subject, the charm and attraction of amusing stories, that we have only now, on the appearance of this new edition of these illustrations, to bid them warmly welcome, and to express the hope that the publisher may find it his interest to continue the series, as we are sure readers of all ages and pursuits will find both pleasure and instruction in perusing them.

Elements of Plane and Spherical Trigonometry, &c. &c., by F. R. Young, *with some original researches in Spherical Geometry*, by F. S. Davies, F. R. S. E. &c., revised and corrected by J. D. Williams. *Philadelphia*, Carey, Lea & Blanchard.—The merit of such a republication as this of a book of established reputation, must consist much in its accuracy and scrupulous correctness; that merit is claimed for this edition by Mr. Williams, and in all other respects of typography and paper, it is unusually well got up.

The New England Magazine, for December.—Boston, J. T. Buckingham.

The American Monthly Magazine, for December. New York, M. Bancroft.

The Knickerbocker, for December. New York, Peabody & Co.

The U. States Naval and Military Magazine. Washington, B. Homans.

American Turf Register. Baltimore, J. Skinner.

Museum of Foreign Literature, &c. Philadelphia, J. Littell.

Revue Francaise, No. II. New York, Hoskins & Snowden.

Amidst the busy hours which the requisite attention to the proceedings in Congress, and the various State Legislatures do, at this season, impose upon us, we are always glad to turn for a while to the more tranquil attractions of our periodical literature. Of the magazines for this month, we have not, however, yet been able to read more than portions here and there; but enough generally to satisfy us, that upon the whole they are only average numbers, not marked by any striking excellence this month.

We have room only for a single extract, and that from the magazine at the head of the list. It is a description, eloquently written and felt, of a statue by our countryman Greenough, of *Medora:*

The statue of Medora is modeled from Byron's description in the Corsair.

> In life itself she was so still and fair,
> That death with gentler aspect withered there;
> And the cold flowers her colder hand contained,
> In that last grasp as tenderly were strained
> As if she scarcely felt, but feigned a sleep,
> And made it almost mockery yet to weep;
> The long dark lashes fringed her lids of snow,
> And veiled—thought shrinks from all that lurked below—
> Oh! o'er the eye death most exerts his might,
> And hurls the spirit from her throne of light!
> Sinks those blue orbs in that long last eclipse,
> But spares as yet the charm around her lips—
> Yet, yet they seem as they forebore to smile,
> And wished repose—but only for a while;
> But the white shroud, and each extended tress,
> Long—fair—but spread in utter lifelessness,
> Which late the sport of every summer wind,
> Escaped the baffled wreath that strove to bind;
> These—and the pale pure cheek became the bier—
> But she is nothing—wherefore is he here?

Beautiful poetry this! But go, reader, and gaze on the sculptured marble. The artist has surpassed the poet. Taking his general idea from Byron, Greenough has wrought it into a form of loveliness, and given it a tenderness, a pathos, a deep and solemn beauty, before which the gayest talker and the most frivolous laugher are silenced in a moment. No loud tones have been heard in that sad presence. It is the abode of death in the perfection of melancholy beauty. Criticism is hardly possible. The deepest emotions of the heart are moved, and we come away with a sober and chastened feeling, and with an image of soft and gentle loveliness impressed upon the soul, which will abide there forever.

The chiseling of this beautiful piece is beyond praise. In the most subordinate particulars, it is finished with exquisite delicacy. The soul of the artist was in the work, and animated every part of it. The repose of the attitude, the sweetness of the expression, the flow and transparency of the drapery, are as near perfection as they can be. The wavy hair floats over the pillow in gentle undulations, wrought with the finest delicacy of handling. Every part of the form, the lines of the mouth, position of the head, the contour of the neck, the bust, the arms, the hand holding the flowers, and the draped limbs, are rendered with the utmost skill, harmony, chasteness and proportion. Before the beauties of this achievement of cultivated genius, description falters. We borrow a few lines from Lord Byron, which, by a slight change of application, more closely illustrate this piece than the passage from which it was professedly taken.

> He who hath bent him o'er the dead,
> Ere the first day of death is fled;
> The first dark day of nothingness
> The last of danger and distress;
> (*Before Decay's effacing fingers*
> *Have swept the lines where beauty lingers*)
> And marked the mild angelic air—
> The rapture of repose that's there—
> The fixed yet tender traits that streak
> The languor of that placid cheek
> And—but for that sad shrouded eye,
> That fires not—wins not—weeps not now—
> And but for that chill changeless brow
> Where cold obstruction's apathy
> Appals the gazing mourner's heart
> As if to him it could impart
> The doom he dreads, yet dwells upon—
> Yes—but for these and these alone
> Some moments—ay—one treacherous hour
> He still might doubt the tyrant's power,
> *So fair, so calm, so softly sealed*
> *The first, last look, by death revealed.*

We have been told by gentlemen, who have visited Mr. Greenough's studio, in Florence, that Homer is his constant companion. The beautiful simplicity, and the vivid, *animating* genius of this poet, in whose verse the personages of the scene stand distinctly before the reader's eye, with the perfect outline and fully-developed form of statues, is a singularly appropriate teacher for the sculptor. In his poetry, there is nothing grotesque, exaggerated, or unnatural; but there is much that is supernatural or ideal. In this, Homer differs much from other early poets;—Dante, for example, whose immortal work is full of the most strange conceptions;—and in this respect, too, Homer, rather than any other poet, should be in the hands of the sculptor. Homer was the copious fountain from which the ancient artists drew their conceptions of simplicity and beauty. When Phidias was asked whence he derived the idea of the Olympian Jupiter, he replied by quoting the famous lines in the Iliad, which describe the Father of Gods and Men as shaking Olympus by his nod; and an ancient critic remarked, that this statue was so wonderful and sublime, that Jupiter himself must have revealed his form to the vision of the artist.

It is a pleasant thing to contemplate a young American following the same career with the great men of antiquity. The bard of Chios teaching a native of the western world the same lesson of truth, and beauty, and grandeur, that he taught of old in the schools of Athens, must excite the dullest mind to a train of agreeable reflections.

Mr. Greenough has evidently benefited very much by his classical taste in literature. He is perfectly free from fantastic ornaments, and tasteless trickery; he shows a preference of the pure and the simple over the gaudy and ornate; he confines himself strictly to the legitimate objects of his art, and now bids fair to rival the first masters in tenderness and grace, in propriety and dignity, in chasteness of design, and perfectness of execution. How far he will succeed in works of a more stern and sublime character, his countrymen have as yet had no opportunity of judging. In a few years we shall all have the privilege of seeing with our own eyes. To embody in enduring marble the imposing form of the FATHER OF HIS COUNTRY is a work which the proudest genius should deem itself happy in accomplishing.

The Dominie's Legacy, by Pickens, 2 vols. *Philadelphia:* Carey, Lea & Blanchard.—It was only last Saturday that we had occasion to express our admiration of the late work, and in some sort a sequel to this now republished, of Mr. Pickens. We merely add now, therefore, that those who may have read the sequel, will in that have found motive enough to possess themselves of these, the original volumes.

Among forthcoming works, we understand that the "History of the Hartford Convention, by Theodore Dwight," will appear early next week. It will, we are quite sure, be eagerly sought, for many reasons.

The letter of H., with which we conclude, describing the field of Braddock's defeat and Washington's early fame, will interest our readers:

NOVEMBER 10th.

It was a bright bracing autumnal morning as I rode out of Pittsburg, with a party of gentlemen for "Braddock's field." Our route followed the course of the river; sometimes keeping the rich bottom on its borders, and again ascending a hilly ridge which always commanded some varied view of that stream, conducted here by steep hills, whose shadows met as they slept upon its quiet bosom, and expanding there into a small lake, apparently so completely landlocked that it seems not a part of the bright current you can see flashing through through those meadows further on. After catching more than one glimpse like this of the landscape behind us whose sunny fields contrasted beautifully with the dense smoke of Pittsburg in the back ground, we struck into a ravine cutting the road hitherto pursued at right angles. Winding now thro' a deep dingle where the pathside was festooned with vines, we crossed a small brook and reached the shore of the Monongahela opposite to a broad alluvial flat, whose high cultivation and sunny aspect contrasted vividly with the wild and secluded dell from the mouth of which we beheld it. The road next led for ot some distance through a wood on the immediate bank of the river, and then gaining the more public highway, we found ourselves, after passing several comfortable farm houses, immediately in front of the battle ground.

It is cut up now by three or four enclosures, —the field upon which the fight was hottest lying nearly in the centre, bounded on one side by the road, and having its opposite extremity about a quarter of a mile from the river, with a wooded flat intervening. Beyond this flat is the ford over which Braddock passed. The ground about three hundred yards from the ford rises in a gradual slope for some two hundred yards more, and then swells suddenly into a tolerably steep hill, the summit of which may be half a mile from the river. On the middle slope lies the central field of action, to which I have already alluded. It is seamed with two shallow ravines, which run parallel with each other towards the river, and are about gunshot apart.

In these ravines, concealed by the underwood, and protected by the trunks of trees felled for the purpose, lay the French and Indian force. It amounted, according to the best accounts, to only 500 men, and was commanded by a subaltern officer, who suggested this ambuscade as a desperate expedient to save Fort Du Quesne, from the overwhelming force that was about to invest it. The road of Braddock lay immediately between these enfilading parties.

It was about midday when he passed his troops over the river in detachments of two hundred and five hundred, followed by the column of artillery, the baggage, and the main body of the army commanded by himself in person. The latter had hardly time to form upon the flat below, when a quick fire in front told them that the two detachments which had gained the first slope were already engaged. Their comrades advanced in double quick step to sustain them; but the whole five hundred gave way, and falling back upon the advancing troops, struck panic and dismay throughout the ranks in a moment. The confusion seemed for a while irremediable. Some fired off their ammunition without aim or object, and others deaf to the commands and exhortations of their officers, flung away their arms and gave themselves up at once to despair.

Burning with the disgrace, and eager to shame their soldiers into better conduct, the British officers advanced singly and in squads among the bullets of the enemy. They were slaughtered indeed like sheep, but their men, whose retreat had been partially cut off by the river, rallied at the galling sight, and, after the cool determination of young Washington, who had already had two horses shot under him, and his clothes pierced with bullets, had imparted some steadiness to their feelings, they seemed ready to protract the fight to the best advantage. The madness of Braddock, however, whose weak mind took fire at the idea of receiving a lesson from a provincial youth of three and twenty, destroyed every remaining chance of success. He insisted upon his men forming on the spot, and advancing in regular platoon against an enemy which none of them could see. Line after line, they would hardly attain a pace between the fatal ravines before they would be mowed down like grass. But their courage was now up, and, though broken and in some disorder, they attempted, with courageous pertinacity, to secure each step they gained by protecting themselves behind the trees, and returning the murderous fire of the foe after his own fashion. The military coxcomb who commanded this ill-fated band would not hear of this. He stamped, raved, and swore, called his men cowards, and struck them with his sword. In the meantime, an evolution was being executed, n another part of the field, which might yet have turned the fate of the day. Capt. Waggoner, of the Virginia forces, pushed his fine corps, consisting of 80 men, beyond the voice of his besotted commander, to the summit of the hill, with the loss of only three men, in running the fearful gauntlet he did to attain that position. A fallen tree here protected his brave little force, and enabled him to rake the ravines which lay at right angles to his natural breastwork to great advantage. But the Virginians were mistaken by their English friends below for a new enemy, and fired upon so furiously that they were compelled to retreat from their position with the loss of two-thirds of the corps killed by their misguided comrades. Thus was the strife protracted for nearly three hours, when the fall of Braddock, after losing 700 men and 40 officers, put an end to the blind conflict. Fifteen hundred men, being thrice the number of the foe engaged, escaped to tell the havoc of the day, and spread consternation and horror throughout the provice.

The military chest of the British, containing 25,000 pounds, fell into the hands of the enemy, as did likewise an extensive train of artillery, with ammunition and provisions to a large amount. Among those who perished on this disastrous occasion, were Sir William Shirley, a son of the Governor of New York, and Sir Peter Halket, with one of his sons, and other officers of distinction or promise. Sir John St. Clair and Lieut. Colonel Gage, afterwards well known in our revolutionary history, were among the wounded. Many of the officers fell at the first onset, but Braddock himself had advanced some distance up the hill when he received the mortal wound of which he died a day or two afterward. The stump of the tree against which he leaned after being struck, is still pointed out in a wheat field above the highway. He was carried off, as you recollect, by the flying troops, and dying with many others on the march was buried beneath the road over which his men were retreating.

The letters of Horace Walpole, recently published, have thrown a light upon Braddock's character that should put an end at once to all the forbearance that has hitherto been exercised in commenting upon his share in this bloody transaction. The misfortunes of the hot and misguided, but high-bred and gallant soldier, were to be touched upon with lenity. The selfish rashness and utter destitution of military capacity of the broken down gambler should be stigmatized as they deserve. Yet it is not from Walpole alone that we learn what a presumptuous blockhead England sent hither to mend his ruined fortunes, at the risque of the best blood in the country. For, though history has dealt so leniently with his character, the records of those times paint the man in his true colors, and so gross was his ignorance, and so offensive his pride, that he seems to have been hated and despised from the moment he assumed the command of the forces destined hither. The interest with which I viewed the battle-ground, has kept me all the morning looking over a mass of documents relating to those times, and, as they are still before me, I am tempted to make more than one extract. "We have a general," writes the brave and accomplished Sir William Shirley, from the camp at Cumberland, to his friend, Governor Morris, at Philadelphia, "we have a general most judiciously chosen for being disqualified for the service he is employed in, in almost every respect. I am greatly disgusted at seeing an expedition, (as it is called,) so ill concerted originally in England, so ill appointed, and so improperly conducted since in America. I shall be very happy to have to retract hereafter what I have said, and submit to be censured as moody and apprehensive. I hope, my dear Morris, to spend a tolerable winter with you at Philadelphia." Poor Shirley, he never saw that winter. He was shot through the brain at the very commencement of the battle.

There is a lively comment on this letter in the well known reply of Braddock to the prudent suggestions of Washington previous to the battle:—"By G—d, Sir, these are high times, when a British General is to take counsel from a Virginia buckskin."

But the speech of an Indian Chief before the council of Pennsylvania, preserved among the records of Harrisburgh, offers an illustration still more striking. "Brothers," said the sagacious ally of the colonists, "it is well known to you how unhappily we have been defeated by the French on Monongohela. We must let you know that it was of the pride and ignorance of that great General that came from England. He is now dead; but he was a bad man when he was alive. He looked upon us as dogs, and would never hear anything that was said to him. We often endeavored to advise him, and to tell him of the danger he was in with his soldiers. But he never appeared pleased with us, and that was the reason that a great many of our warriors left him, and would not be under his command. Brothers, we advise you not to give up the point, though we have in a measure been chastised from above. But let us unite our strength. You are very numerous, and all the Governors along your eastern shores can raise men enough.—Don't let those that come over the great seas be concerned any more. They are unfit to fight in the woods. Let us go by ourselves—*we that come out of this ground.* WE may be assured to conquer the French." The military counsel and support of this intrepid and high-souled Chieftain would have been heard at least, even if it did not prevail, in the camp of Napoleon. Does it not make you indignant to think how it was trampled upon and insulted by such a creature as Braddock? One would have thought that the insolent spirit of the London debauchee would have felt rebuked into nothingness before the genius of the warrior of the woods. But let the man rest; he had that one virtue to which all weak minds bow—courage. And he had the Hessians, that in a subsequent war were bought to fight against us for eighteen pence a day. May we rather meet, again and again, such brave mercenaries in battle, than be marshalled once to the fight by a leader, whom even valor cannot shelter from deserved contempt.

The field of this celebrated action presents of course a very different appearance from what it did when Braddock's followers were here hunted through the forest. It is however but a few years since the wood was cut from the side-hill, and traces of the conflict are still occasionally discovered in the grove along the margin of the river below. I was told too that bones and bullets, with rusted knives, hatchets and bayonets, were sometimes even yet turned up by the plough in the spot where the fight was hottest. This central field was cleared

about 17 years since. It was heavily timbered at the time, and they tell in the neighborhood that the teeth of the saws in the mills adjacent were continually broken upon the balls imbedded in the ancient trees. Incredible quantities of human bones and rust-eaten weapons are said to have been found beneath the surface of the soil, when the plough first invaded this memorable wood. I picked up a bone myself, which my horse's hoof disengaged from the soil, but my skill in anatomy not being sufficient to determine whether it was even human or not, I returned the mouldering relic to the dust, of which it was rapidly becoming a part. It was an animated and interesting hour's amusement, after our party had taken down the intermediate fences, which were too high to clear, to gallop over the whole battle-ground, and survey it from every point. A prettier spot to fight on never greeted the eye of a soldier. The undulations of the field are just sufficient to exercise a nice military discrimination in the choice of position, while the ground is yet so little broken that cavalry might act on any part of it to advantage. The centre of the battle-field would command a fine view of the river, were but a vista or two cut in the wood below; and even now it offers a beautiful seite for a private residence, and would, with the lands adjacent, make a noble park. There are a few superb oaks still standing at the foot of the slope, which might constitute a lawn, and—what must enhance the value of the place with all faithful ghost-believers and pious lovers of the marvellous—the dim form of the red savage, with a ghastly spectre of his pallid victim shrieking before it, it is said may be seen gliding at times among these hoary trunks. The exorcising light of noon most perversely shone down among them while I lingered near the spot, but I could fancy that the November wind which sighed among their branches was charged at times with a wailing sound, such—such in fact as an orthodox tree in a perfect state of health would never make of its own accord.

Returning home, one of the party proposed stopping at a gentleman's house in the vicinity, where a number of articles picked up from the field were said to be collected. Not a soul of us knew the proprietor of the establishment, and it would have amused you to see the effect produced upon its inmates, whom I soon ascertained to be a large collection of boarding school young ladies, by our formidable descent upon the premises. We were asked into a handsome parlor, and in about fifteen minutes our host appeared. A gentleman of our number, whose western frankness of manner and ease of expression made him the most suitable spokesman at such an awkward meeting, opened the preliminaries, and apologizing for our unceremonious intrusion revealed our character as relic hunters. The stranger host, overlooking the absence of "sandal shoon and scallop shell," welcomed us at once, with the same politeness that pilgrims have ever received in civilized countries, and regretting that he had not even enough of the "true cross" to swear by—not an atom of a relic—sent us home to our supper with appetites considerably sharpened by the disappointment.

Returning, I diverged with one of the company from the direct road a little, to take a look at the United States arsenal. It lies on the banks of the Allegany, and consists, together with the officer's quarters, of a number of handsome brick buildings painted cream color, and so arranged with regard to each other, as that in connexion with the improved grounds adjacent, they make quite an imposing appearance.

It was nearly dark when we got fairly into town, where the dust and smoke along the streets, with the rattling of drays returning from their day's work to the suburbs, reminded me not a little of my own bustling city at night-fall. There is one sound, however, in the streets of Pittsburg, which utterly forbids a stranger mistaking them for those of any other town on the continent. It is the ceaseless din of the steam engines. Every mechanic here of any pretension has one of these tremendous journeymen at work in his establishment. They may be purchased for what would be the price of a pair of horses in New-York, and it costs a mere song to keep them in fuel. These machines must do the work of a great many thousand men at Pittsburg; and though I am hardly such a friend of universal suffrage as to think that these substitutes for men ought to be represented in the legislature, yet, upon my word, they should always be taken into consideration when estimating the population of the place, which their industrious labor renders so flourishing.

"Proud deeds these iron men have done."

FOREIGN INTELLIGENCE.

LATER FROM EUROPE.—By the packet ship *Europe*, from Liverpool, we have London papers to and of the 16th ult. which, though later by nine or ten days than our previous accounts, furnish little of political interest. The commercial accounts will not be found very encouraging.

A Treasury order for 8,000*l.* has been presented to Capt. Ross for his discoveries in the north pole; also, the Royal Medal (50 guineas) has been conferred upon him.

The affairs of the Peninsula, including both Spain and Portugal, remain much as before. The Queen Regent of Spain seems to be in the predicament that if France does not sustain her, she must throw herself for support upon the *liberal* party among her own subjects, whose hearty co-operation would at once crush the opposition of the Carlists. It is to be desired, certainly, that she may be driven to this alternative. *Castanos* and *El Pastor*, at the head of a small regular force, had been encountered and worsted by a large body of Carlists, and driven to take refuge within the fortifications of St. Sebastian. Rumor had been current that old Soult had ordered an army of *thirty thousand men, as a corps of observation*, to enter Spain, but the London Courier of 15th, and the Times of 16th, partially contradict, on the authority of Paris papers of the 13th, those rumors. The Courier says:

We have received French papers of the 13 inst. and they bring no confirmation of the rumors to which we yesterday adverted, relative to the interference of France, and which were magnified by our own stock-jobbers into a positive assertion that orders had been issued for the immediate advance of the French army of observation into Spain, and willingly believed by and readily inserted in some of our Contemporaries. The news from Spain, such as it is, is rather more favorable than yesterday to the Queen's cause; but there is nothing decisive either way.

One of the most curious items of intelligence certainly is an alleged threat of *Rothschild*, the banker, to Marshal *Soult*, that "if the French army set a foot in Spain, *he* would not again set a foot on Change." This would be the potentiality of money with a vengeance.

Our accounts from Portugal direct are later than in the London papers.

The Belgic Chambers were opened on the 12th November. The only remarkable feature, is the King's speech, after congratulating the nation and himself, on the birth of the Prince Royal, is the fact that the dispute with Holland, is still, and is long likely to be, *unadjusted*.

[*From the National.*]

PARIS, Nov. 12.—There will now be a post of Carlist insurgents occuppying the Spanish side of the bridge of the Bidassoa, within pistol shot of the French sentihels.

Lettres from Madrid at Bayonne announce that orders had been sent to General Saarsfield not to quit Burgos.

[*From the Messenger.*]

It was affirmed on 'Change that M. de Rothschild had been to see Marshal Soult, and had declared to him that if the French army set a foot in Spain he would not again set foot on 'Change.

Extract from the *Indicateur* of the 11th, by a particular conveyance;—The accounts from Spain this morning are much more satisfactory. The panic has passed over—people have reflected that it was very astonishing that Castagnos has been able to hold out a month with 700 men against 6,000, and his retreat to St. Sebastian has ceased to surprise any body.

This success of the Carlists, as a military operation, is a trifle, bnt from its moral effect, the affair is of more importance, because it may encourage the rebels, and alarm the Constitutionalists.

In our opinion, the most imortant point is, that the two parties are now face to face, and a few days will show which is the strongest.

A letter from Bayonne of the 9th, and St. Sebtasdan of the 8th relate only the particulars of the retreat of Castagnos and El Pastor to St. Sebastian.

Among all the extraordinary and gifted individuals whom the French revolution, and the mighty events consequent upon it, have from time to time brought upon the scene, there is not one, probably, whose character, abilities, sagacity and success, have been so remarkable and unerring as those of Talleyrand. Hence it is not to be wondered at that now, even in his latest years, his most trivial acts are watched and commented upon, as though fraught with weal or wo to empires and dynasties. Hence even his visiting cards are, it seems, most significant:

[*Translation from a late French paper.*]

TALLEYRAND'S VISITING CARDS.—This Prince, on his return from England, has, of course, left cards with all the great men of the day, but under various forms and titles. He has two kinds of cards—the cards under *envelope*, and the plain card with one corner turned up. According to etiquette, two descriptions of cards are necessary in his double character of Ambassador and Peer.

The card under envelope is that of *etiquette*, and is sent by a footman. The other is presumed to have been delivered in person, and intended as a visit of friendship. Happy he who receives it! Lafitte *formerly* obtained the plain card—*now* he receives one under cover.

Talleyrand commenced his visits as an Ambassador. The members of the *corps diplomatique* have therefore received his card; but the Representatives of the Northern Powers, have, it is said, received only the card under *envelope*. From this latter fact the supposition arises that there is something sinister and threatening. Furthermore, M. de Broglie, the minister of Foreign Affairs, has been left out. In this instance one would naturally infer a want of propriety, but we can give a ready explanation. The Prince has retreating doors; he has just commenced his visits as a Peer of France, and M. de Broglie, being his colleague in peerage, has received a visit. One naturally perceives the difference, and it is most subtle. The order of the visit, and the form of the card have caused M. de Broglie's card to tremble in his hand, and spread alarm in his hotel.

With regard to M. Thiers, (Minister of Commerce) he has been unable to pay a visit to him, as the former, it appears, has taken quarters at the Hotel St. Florentin, (Talleyrand's.) He does not move from it, and keeps a steady eye on that living *political barometer*, in order to study which wind blows at the Thuilleries, and trim his sails accordingly. Moreover, as M. Thiers pretends to belong to the political schools of this cunning Nestor of Diplomatists, he thinks he has no time to lose to improve upon the lessons of his master.

The packet ship Europe, by agreement with shippers and consignees, and by permission of the insurance company, lies off at sea, without the limits o the United States, until after the 1st proximo, in order that the goods by her may be introduced after that period at the reduced duties.

[*From the Globe.*]

The Commissioners under the Convention with the King of the Two Sicilies, who have been for the last four weeks engaged in this city, in the examination of memorials, closed their session on Friday, having disposed of all the memorials filed with the Secretary, under their order of September last. Their next meeting will take place on the first Monday in March next.

CONGRESS—Monday, December 9, 1833.

HOUSE OF REPRESENTATIVES.

The several Standing Committees were announced from the Chair, as follows:

Elections.—Messrs. Claiborne, Griffin, Hawkins of N. C., Banks, Vanderpool, Jones of Georgia, Peyton, Haymer, and Hannegan.

Ways and Means.—Messrs. Polk, Wilde, Cambreleng, Gorham, McKim, Binney, Loyall, McKinley, and Hubbard.

Claims.—Messrs. Whittlesey of Ohio, Barber, McIntire, Grennell, H. King, Gholson, Cramer, Forrester, and Bynum.

Commerce.—Messrs. Sutherland, Davis of Mass., Harper, Foot, McKay, Lawrence, Pinckney, Heath, and Selden.

Public Lands.—Messrs. Clay, Duncan, Boon, Mason, Clayton, Slade of Vt., Leavitt, Ashley, and Ingersoll.

Post Offices and Post Roads.—Messrs. Conner, Kavanagh, Pearce of Rhode Island, Thomas of La., Briggs, Murphy, Lane, Lytle, and Laporte.

District of Columbia.—Messrs. Chinn, W. B. Shepherd, McKennon, Stoddert, Allen of Va., Dannis, Heister, Fillmore, and Taylor.

Judiciary.—Messrs. Bell, of Tenn., Ellsworth, Foster, Gordon, Beardsley, Thomas of Md., Hardin, Parks, and Pierce, of N. H.

Revolutionary Claims.——Messrs. Muhlenberg, Crane, Bates, of Mass., Standefer, Bouldin, Marshall, Young, Baylies, and Turrill.

Public Expenditures.—Messrs. Davenport, Lyon, Paige, Clarke, of Pa.; Tweedy, Gillet, Hall, of Vt; McClene, and Kinnard.

Private Land Claims——Messrs. Johnson, of Tenn.; Mardis, Carr, Galbraith, Man, of N. Y.; Cage, Felder, Casey, and Bull.

Manufactures.—Messrs. Adams, of Mass.; Huntington, of Conn.; Denny, Davis, of S. C. Corwin, Dickerson, Martindale, McComas, and Osgood.

Agriculture.—Messrs. Bockee, Taylor, of Va. Hathaway, Barnitz, Bean, Dunlop, Clowney, Turner, and Davis, of Ky.

Indian Affairs.—Messrs. Lewis, Gilmer, McCarty, Everett, of Vt. Graham, Allen, of Ohio, Dickerson, of Tenn. Howell, and Love.

Military Affairs.—Messrs. Johnson, of Ky. Vance, Speight, Ward, Blair, of S. C. Thompson, of Ohio, Burd, Coffee, and Bunce.

Naval Affairs.—Messrs. White, of N. Y. Williams, Watmough, Patton, Lansing, Reed, Grayson, Parker, and Smith.

Foreign Affairs.—Messrs. Archer, Everett, of Mass. Wayne, McDuffie, Hall, of N. C. Coulter, Jarvis, Pierson, and Carmichael.

Territories.—Messrs. Williams, Allen of Ky. Potts, Johnson, of N. Y. Anthony, Wilson, of Va. Jones, of Ohio, Ewing, and Gamble.

Revolutionary Pensions.—Messrs. Wardwell, Barringer, Tompkins, Moore, V., Lea, Deming, W. K. Fuller, Fowler, and Bell of Ohio.

Invalid Pensions.—Messrs. Burges, Evans, Beall, Schley, Adams, of N. Y., Schenck, Chilton, Chaney, and Mitchell of Ohio.

Roads and Canals.—Messrs. Mercer, Blair of Tenn. Vinton, Stewart, Rencher, Johnson, of Md. Lucas, Pope, and Slade of Illinois.

Revisal and unfinished business.—Messrs. Dickson, Harrison of Pa. McVean, Shinn, and Beatty.

Accounts.—Messrs. Mann of Pa. Lee of N. J. Mitchell of N. Y. Crockett, and Miller.

Expenditures in the Department of State.—Messrs. A. H. Shepherd, Day, Beaumont, Bodle, and Patterson.

Expenditures in the Department of the Treasury.—Messrs. Allen of Vt. P. C. Fuller, Harper of Pa., Spangler, and Clarke of N. Y.

Expenditures in the Department of the Navy.—Messrs. Hall of Me. Huntington of N. J., Ramsey, Sloane and VanHooten.

Expenditures in the Department of the Post Office—Messrs. Hawes, Fulton, and Lee, of New Jersey.

Expenditures in the Department of War.—Messrs. Whittlesey, of N. Y. Deberry, Chambers, Webster, of Ohio, and Halsey.

Expenditures on Public Buildings—Messrs. Whallen, Darlington, Brown, Henderson, and Hard.

QUICKSILVER.—By letters from Canton by the Providence, we learn that many frauds have lately been detected in this article. The iron jars in which it is usually imported contain 76 1-2 lbs each, but they have not only been found deficient in weight, but in many instances 6 to 8 pounds of lead! have been found in a flask. It is advised that at least 10 flasks out of every 100 should be re-weigned before they are shipped, either from this country or from Europe.

[*From the Albany Argus.*]

APPLICATIONS TO THE LEGISLATURE.—List of intended applications to the Legislature of this State, at its next session, prepared from the official notices published in the Argus, down to Dec. 3:—

To Incorporate Banks.

Jackson Bank	$1,000,000	New York.
Eighth Ward Bank	500,000	do
Builders' Bank	600,000	do
Commercial Bank	500,000	do
Tompkins Bank	500,000	do
Bank of Exchequer	10,000,000	do
Washington Monument Bank	750,000	do
Eighth Ward Temperance Bank	500,000	do
Merchants' and Clothiers' Bank	500,000	do
Bank of the State of New York	10,000,000	do
Maiden lane Bank	1,000,000	do
Flour Merchants' Bank	750,000	do
Pearl street Bank	2,000,000	do
Bank of New York	600,000	do
Grocers' Bank	1,000,000	do
Bookmakers' Bank	500,000	do
Com. Bank of the city of N. York.	500,000	do
A bank at Harlæm	500,000	Harlæm.
Chemango Canal Bank	100,000	Greene.
Lumbermen's Bank	150,000	Bainbridge.
Wool Growers' Bank	250,000	Norwich.
A bank at New Berlin	100,000	New Berlin.
Oxford Bank	200,000	Oxford.
City Bank of Albany	500,000	Albany.
Merchants' Bank of Albany	300,000	do
Watervliet Bank	300,000	Watervliet.
Orleans county Bank	200,000	Medina.
Bank of Orleans	150,000	Albion.
Central Bank of Troy	300,000	Troy.
Manufac's, Mech's & Farmers' B'k	500,000	do
Rensselaer county Bank	200,000	Lansingburgh.
Farmers' and Manufacturers' Bank	300,000	Poughkeepsie.
Commercial Bank	500,000	Buffalo.
Butchers' and Drovers' Bank	1,000,000	do
Bank of Erie county	1,000,000	do
Rail-Road Bank	150,000	Ballston Spa.
A bank at Saratoga Springs	200,000	Saratoga Spa.
Waterford Bank	200,000	Waterford.
Bank of Cahoes	250,000	Cahoes.
Cortland Bank	200,000	Cort. Village.
Homer Bank	250,000	Hom. village.
A bank at Delhi	100,000	Delhi.
Canajoharie Bank	200,000	Canajoharie.
Fort Plain Bank	250,000	Minden.
Kingston Bank	200,000	Kingston.
Ulster and Dutchess Bank	200,000	Ulster
Bank of Rhinebeck	100,000	Rhinebeck.
Hamilton Bank	150,000	Hamilton.
Chittenango Bank	200,000	Chittenango.
Cattaraugus Bank	100,000	Olean.
Bank of Olean	100,000	do
Cattaraugus county Bank	150,000	Ellicottville.
Sacket's Harbor Bank	200,000	Sacket's Har.
Bank of Salem	100,000	Salem.
Washington county Bank	100,000	Sandy Hill.
Battenkill Bank	100,000	Union Village.
Flushing Bank	100,000	Flushing.
Tompkins county Bank	250,000	Ithaca.
Fredonia Bank	200,000	Fredonia.
A bank at Coxsackie Landing	100,000	C. Landing.
A bank at Kinderhook	200,000	Kinderhook.
A bank at Hudson	300,000	Hudson.
Bank of Dansville	200,000	Dansville.
Bank of Mount Morris	200,000	Mt Morris.
Highland Bank	200,000	Newburgh.
Mechanics' Bank of Rochester	300,000	Rochester.
Bank of Attica	100,000	Attica.
A bank at Perry (Genesee co.)	100,000	Perry.
Le Roy Bank	200,000	Le Roy.
Susquehannah River Bank	100,000	Binghampton.
Bank of Owego	200,000	Owego.
A bank at Williamsburgh	200,000	Williamsb'gh.
Bank of Lyons	200,000	Lyons.
Clyde Bank	200,000	Clyde.
Watervilie Bank	200,000	Watervilie.
Oneida county Bank	400,000	Utica.
Mechanics' and Farmers' Bank	300,000	Oswego.
St. Lawrence Bank	200,000	Ogdensburgh.
Allegany county Bank	150,000	Angelica.
Canal Bank at Lockport	200,000	Lockport.

To increase the Capital Stock of Banks.

Greenwich Bank	$300,000	New York.
Dry Dock Company	300,000	do
Phœnix Bank	1,000,000	do
Bank of New York	600,000	do
National Bank	250,000	do
Leather Manufacturers' Bank	400,000	do
Jeffersen county Bank	120,000	Watertown.
Bank of Genesee	150,000	Batavia.
Saratoga county Bank	100,000	Waterford.
Ogdensburgh Bank	200,000	Ogdensburgh.
Bank of Newburgh	105,000	Newburgh.
Bank of Buffalo	300,000	Buffalo.
Lockport Bank	100,000	Lockport.

To incorporate Insurance, Exchange, Trust, and Loan Companies.

Amer. Life Ins. and Trust Co.	N. Y. (4 ap.)	2 to $3,000,000
U. States do	do do	3,000,000
Columbian do	do do	2 to 4,000,000
National do	do do	2,0000,000
N. Y State do	do Albany	750,000
L. Island do	do Brooklyn	1,000,000
City Loan Company of New York,	New York,	2 to 5,000,000
City Exchange Company,	do	1,000,000
Hudson Fire Insurance Co.	do	250,000
Eighth Ward Insuranc Co.	do	150,000
N. Y. Marine Insurance Co.	do	300,000
Coasting Insurance Co.	do	150 to 300,000
Union Fire Insurance Co.	do	300,000
Van Buren Insurance Co.	do	200,000
Columbia Insurance Co.	do	500,000
Greenwich Insurance Co.	do	200.000
Erie Fire and Marine Ins. and Loan Co.,	Buffalo,	100 to 300,000

To raise Money by tax.

$35,000 annually, in Troy, for sundry Literary purposes.

1,000 in Allegany county, for Bridge across the Genesee river.

3,000 for the same purpose, at Portage, Allegany county.

10,000 in Albany county, to build a new Jail and Work-house.

500 annually, for three years, in Granville, Washington county, to repair Bridges.

500 in Genesee county, to build a Bridge across the Tonawanda creek.

2,000 in Ulster county, for a Bridge across the Rondout creek.

In Clinton county, to pay Levi Platt.

In Bushwick, for erecting Cells in that town.

In Herkimer county, an additional sum for building a Jail.

To Incorporate Railroad Companies.

Syracuse Railroad Company, (Salina to Utica)	$1,500,000
Railroad from Albany to West Troy	
From Troy to Schenactady	450,000
From Troy to New Lebanon	300,000
Troy and Schenectady, (2 ap.)	250,000
Troy and Champlain (Waterford to Whitehall)	600.000
From Esopus creek to tide water, (or turnpike)	15,000
From Waterford to Whitehall	800,000
From Columbus Point, Ulster county, to Chenango Point	500,000
Herkimer and Montgomery	150,000
From Williamsburg, Kings county, or Jamaica, Queens county, to Greensport, Suffolk county	
From Utica to Oswego	
Two from Buffalo to Niagara Falls	
From Salina to Utica	
From Batavia to Buffalo	
From Attica, Genesee county, to Buffalo, Erie county	
From Lockport to Niagara Falls	
From Rochester to Buffalo	
From Castleton to the Massachusetts line	

To Incorporate McAdam Road Companies.

From West Troy, through Shaker Village, to the Schenectady turnpike	$ 50,000
From Utica to Trenton Falls	150,000
From New Berlin, Chenango county, to Utica	250,000
From Troy to Whitehall	500,000

To incorporate Turnpike Road Companies

Rensselaer and Berkshire Tunnelling and Turnpike Co. capital $100,000—Greenbush and Troy—From Oxford, Chen. to Oneonta, Otsego, $15,000—From Petersburgh to Brunswick, $15,000—Fort Ann and Granville, $10,000—In the town of Chemung, Tioga co.—Across the Indian reservation in Erie co.

To incorporate Bridge Companies.

Schenectady and Saratoga—Across the Hudson at Troy, and across branch of the Mohawk at Watervliet, capital $100,000—Across the Hudson at Albany.

Companies.

Rensselaer Glass Company, (renewal)—Fishkill Iron Co., capital $100,000—Dover Iron Co., $50,000—Orange Cordage Manufactory Co.—Salina Salt Co., $150,000—Frankfort Manufacturing Co.—Lockport Manufacturing Co., $60,000—A Whaling Co. in Peekskill, Westchester co.

To incorporate Academies and Seminaries of Learning.

The N. York Academy of Inventions, capital $100,000—Troy Female Academy—Troy Male Academy—Poughkeepsie Female Seminary—Genesee Wesleyan Seminary at Lima, Liv. co.—Nassau Academy—High School at Preble Corners, Cortland co.—Clyde High School.

To incorporate Savings Banks.

Savings Bank at Buffalo—New York Savings Institution.

To incorporate Religious and Benevolent Societies.

The Second Associate Church in the city of New York—Troy Hibernian Benovolent Society—Troy Annual Conference Ministers' Aid Society.

To incorporate Steamboat, Ferry, and Wharf and Ways Companies.

Southern Steambeat Co. (2 ap.) capital 150 to $200,000—Genesee River Steamboat Co. $30,000—New York and Brooklyn Ferry Co. $100,000—Miamogue Wharf and Ways Co.

To amend existing Charters.

Washington Marine Ins. Co.; Seamen's Bank for Savings; Farmers' Fire Ins. and Loan Co.; Greenwich Savings Bank; New York Athenæum, New York—Farmers' Bank of Troy. [equalizing shares]—Lafayette Fire Co.—Kingston and Middletown Turnpike Road Co.—Ducthess Turnpike Co.—Watervliet Turnpike Road Co.—Croton Turnpike Road Co.—Cocksackie Turnpike Road Co.—Albany and Bethlehem Road Co.—Brunswick and Pittstown Road Co.—Newtown and Bushwick Road Co.—Albany and Schenectady Road Co. [to remove toll gates, &c.]—Mohawk and Hudson R. R. Co.—Brooklyn and Jamaica R. R. Co.—New York and Albany R. R. Co.—City of Troy—Ponghkeepsie Lancaster School Society—Village of Williamsburgh, King's Co.—Village of Poughkeepsie—To repeal the charter of the Montezuma Turnpike and Bridge Co.—Washington County Insurance Co.—Genesee Manual Labor Seminary.

To incorporate Cities and Villages.

City of Brooklyn—City of Rochester—Village of

Rhinebeck—Village of Clarksville, Madison Co.—Village of Attica, Genessee co—Village of Fort Plain, Mont. co.—Village of Bath, Steuben co.

To increase the capital stock of Manufacturing and Turnpike Companies.

Syracuse Salt Company, capital $50,000—Kingston and Middleton Turnpike Road Co., $5000.

To divide Towns and erect new ones.

To annex a part of Pendleton, Niagara., co., to Amherst, Erie co. Also part of Clarence, Erie co., to Lockport, Niagara co. Also to erect a new town in Niagara—To erect a new town in Madison co., from parts of Augusta and Vernon in Oneida co., and Smithfield and Lenox, Madison co.

Miscellaneous Applications.

For the relief of the First Great S. West Turnpike Road Co.—For the release of title to an escheated lot in Albany—To vest in Asa and Acksah Page title to lands in Chautauque co.—To allow a salary to the first judge of Kings co. and to authorize him to hold courts of common pleas—To open the Albany Pier—For the release of the state right to a bond and mortgage on three lots in the city of New York—For a side cut from the Erie canal to the Hudson river at Port Schuyler—To "protect and encourage" Justin Smith in supplying the Village of Whitehall with water—To incorporate the Onondaga Horse-Racing Association.

AN INTERESTING AND USEFUL MAP.

A friend of ours has now in a state of forwardness, a Map upon which will be delineated nearly all the Railroads now chartered in the U. States. It is designed to show the *present* contemplated connexion of the different lines, as well as where others may hereafter be constructed to connect with them. It will be completed in a few weeks, and may be had either in sheets, or put up in morocco for pocket maps, in any quantity, by applying to the subscriber.

D. K. MINOR, 35 Wall street.

New-York, August 14, 1833.

TO STEAMBOAT COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable to sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and deserted by the public as unmindful of safety. Apply, post paid.

S1 R J M M & F

TO RAILROAD COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years, and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1825, by his caveats filed in the Patent Office. Apply, post paid. S1 R J M M & F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbendale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833. F3 tf

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,

WILLIAM NORRIS, Secretary.

[December 2d, 1833.

For further information on this subject see No. 49, page 778 of this Journal. 46

GRACIE, PRIME & CO. having this day taken into co-partnership JOHN CLARKSON JAY, will continue their business under the same firm.—New-York, 1st October, 1833

FOR SALE,

☞ ATLANTIC JOURNAL AND FRIEND OF KNOWLEDGE—A Quarterly Journal, by Professor Rafinesque, of Philadelphia, begun in the spring of 1832, with wood cuts, &c. dedicated to Historical and Natural Sciences, Botany, Agriculture, &c. at one dollar per annum.

MEDICAL FLORA OF THE UNITED STATES, in 2 vols. with 100 plates, containing also the economical properties of 500 genera of American plants. $3.

MANUAL OF AMERICAN VINES, and Art of Making Wines, with 8 figures. 25 cents.

FISHES AND SHELLS OF THE RIVER OHIO. 1 dollar.

AMERICAN FLORIST, with 36 figures—price 36 cts.

*** Orders for these works, or any other of Professor Rafinesque's, received at this office. A9 tf J M & F

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for shins. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

INCOMBUSTIBLE ARCHITECTURE.

☞ INCOMBUSTIBLE dwelling-houses and buildings of all kinds devised or built in New-York, or any part of the United States, as cheap as any other combustible buildings. Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or Incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFINESQUE, Professor of Hist. and Nat. Sciences, Chemist, Architect, &c. in Philadelphia, No. 59 North 8th street. A pamphlet given gratis.

References in New-York.—Mr. Minor, Editor of the Mechanics' Magazine; Messrs. Rushton & Aspinwall, Druggists.

Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means. S1 R J M M & F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane. J31 6t

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Phila. and Norris. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads,

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J28 tf

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete, at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearttе.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1832.

To Messrs Ewin and Hearttе—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same. 3m

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

From the 26th of November to the 9th of December, 1833, inclusive.

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date.	Hours.	Thermometr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
Nov. 26..	6 a. m.	35	29.71	WNW	moderate	WSW	cloudy
	10	36	29.81	..	strong	..	fair
	2 p. m.	36	29.91	..	..	..	..
	6	35	30.80	..	..	..	clear
	10	34	30.10	..	..	..	..
" 27..	6 a. m.	33	30.15	SW	moderate	SSW	fair
	10	40	30.20	..	..	..	..
	2 p. m.	44	30.01	..	..	..	..
	6	41	29.99	..	..	..	..
	10	40	30.03	..	light	..	clear
" 28..	6 a. m.	38	30.18	WNW	..	..	..
	10	40	30.21	..	moderate	W by N	fair
	2 p. m.	40	30.23	W by N	..	..	..
	6	39	30.31	..	..	..	..
	10	35	30.30	..	..	..	..
" 29..	6 a. m.	31	30.30	ENE	..	..	cloudy —smoky
	10	36	30.25	..	..	SSW	.. — ..
	2 p. m.	42	30.21	E	..	..	— ..
	6	43	30.20	..	..	..	— ..
	10	42	30.20	..	..	..	fair
" 30..	6 a. m.	45	30.10	ENE	..	..	rainy —cloudy
	10	45	30.10	..	..	..	cloudy —rainy
	2 p. m.	41	30.05	NE—NNE	fresh	NNE	rain
	6	40	30.05	NNE	..	..	..
	10	39	30.05	N	..	..	cloudy
Decem. 1..	6 a. m.	39	30.03	NNW	moderate	NNW	..
	10	41	30.07	NW	light	..	..
	2 p. m.	45	30.03	..—NNW	.. — mod.	WNW—NNW	fair
	6	40	30.07	NNW	mod.—light	NNW	..
	10	39	30.09	..	..	..	clear
" 2..	6 a. m.	36	30.18	NW—NNW	light	WSW	fair
	10	38	30 23	NNW	..	..	..
	2 p. m.	42	30.20	N—NNE	light—mod.	WSW / NNE—ENE	cloudy
	6	40	30.35	NE	moderate	..	rainy
	10	39	30.27	..	fresh	..	..
" 3..	6 a. m.	40	30.30	NE by E—ENE	..	ENE	cloudy
	10	41	30.33	ENE	..	..	rainy
	2 p. m.	42	30.30	NE by E	..	..	cloudy
	6	41	30.35	..	..	..	..
	10	41	30.35	..	..	..	..
" 4..	6 a. m.	39	30.34	NE	moderate	WSW	..
	10	40	30.36	..	..	.. / ENE	..
	2 p. m.	43	30.32	NE by E	..	..	..
	6	42	30.31	..	..	..	..
	10	41	30.35	..	..	..	..
" 5..	6 a. m.	40	30.36	N by W	faint	..	..
	10	41	30.38	NNW—WSW	..	N—slow	fair —cloudy
	2 p. m.	43	30.36	WSW—N	..	NNW	cloudy
	6	44	30.36	N	..	NW	.. —fair —cloudy
	10	42	30.39	..	..	WNW	..
" 6..	6 a. m.	38	30.39	NNW—N	..	N—slow	.. —fair
	10	41	30.40	N	..	..	fair
	2 p. m.	44	30.40	NNE	light	NNW	..
	6	41	30.40	NE	..	..	..
	10	35	30.41	..	..	..	..
Decem. 7..	6 a. m.	32	30.49	NE	moderate	W by S / NNW	cloudy
	10	34	30.50	..	..	..	.. —fair
	2 p. m.	38	30.49	..	..	W by S / S	fair —cloudy
	6	37	30:48	..	..	..	cloudy
	10	37	30.50	..	..—fresh	..	..
" 8..	6 a. m.	41	30.30	ENE	fr'h—strong	E	rainy —scuds from E
	10	43	30.28	..	strong—gale	ENE	.. —rain
	2 p. m.	42	30.11	..	gale— / strong / —gale	s—mod'te / SE—brisk / ENE—swift	rain at 4—clouds partially open, and strong [gale*
	6	43	30.88	..—NE—NNE	fresh—mod.	..	cloudy —hazy
	10	41	30.81	N by E	moderate	..	hazy —fair
" 9..	6 a. m.	37	30.97	SW—WSW	fresh	WSW / NW	fair
	10	40	30.95	WSW	..	..	..
	2 p. m.	44	30.96	..	..	WSW	cloudy
	6	41	30.98	..	..	..	fair
	10	39	30.98	..	..	..	..

Average temperature of the week ending Monday, December 2, 38°.85.
Do. do. do. do. December 9, 40°.23.

In October the, observations of winds fom the North-Eastern quarter, were 15¼—from the South-Eastern, 23—from the South-Western, 54—from the North-Western, 44.

The observations of the direction of clouds or higher current, for the same month, were as follows: From the North-Eastern quarter, 12—from the South-Eastern, 5—from the South-Western, 77—from the North-Western, 33.

Maximum of the barometer 30.52 in.—Minimum, 29.30 in.—Range, 1.22 in.

In November, the observations of winds are, from the North-Eastern quarter, 23—from the South-Eastern, 11—from the South-Western, 74—from the North-Western, 36.

The higher currents during the same month were, from the North-Eastern quarter, 5—from the South-Eastern, 4—from the South-Western, 69—from the North-Western, 36.

Maximum of barometer 30.57 inches—Minimum, 29.48—Range, 1.09 inches.

* At Middletown, Connecticut, a distance of one hundred miles *to windward*, the crisis of the storm, on Sunday, 8th of December, was near five hours *later* than in this city.

BANK NOTE TABLE.

MAINE.

U. S. Branch..par	Cumberland....¼a¾	Augusta.....¼a¾
Thomaston....¼a¾	Casco.....do	Gardiner.....do
Vassalborough...do	Merchants'.....do	Kennebunk.....do
Canal.....do	Union.....do	Manufacturers'..do
Portland.....do	Waterville.....do	Winthrop.....do
Bangor.....do	Saco.....do	Bath.....nosale
South Berwick...do	Lincoln.....do	

PENNSYLVANIA.

U.S. Bank ..par a¾	Montgomery co.¼a¾	Gettysburgh ..1a1½
Philadel. Banks ..	Columbia Br. Co..do	Carlisle .....do
Harrisburg.....¼a¾	Chester county..do	Miners'.....do
Northampton....do	Lancaster.....do	Pittsburg .....do
Farms' Reading.do	Germantown....do	Chambersburg ..do
Do. Lancaster..do	Delaware county.do	Erie .....do
Do. Bucks co...do	Penn Township..do	Monongahela....5
Easton.....do	York 1a1½	

NEW-HAMPSHIRE.

U. S. Branch.par a¾	Rockingham...¼a¾	Claremont .....¼a¾
Cheshire.....¼a¾	Portsmouth.....do	Grafton.....do
Concord.....do	Farmers'.....do	Merrimack Co...do
Exeter.....do	Piscataqua.....do	Merrimack.....do
New-Hampshire.do	Dover.....do	Commercial.....do
N. H.—Strafford.do	Winnipisseogee..do	Connecticut river do

VERMONT.

Brattleborough..¼a¾	St. Albans.....¼a¾	Orange County.¼a¾
Montpelier.....do	Windsor .....do	Burlington .....do
Rutland .....do	Vergennes .....do	Middlebury.....¼a¾
Bank Caledonia .do	Bennington .....do	

MASSACHUSETTS.

U.S. Branch..par a¾	Plymouth.....¼a¾	Bank of Norfolk¼a¾
Boston city B'ks¼a¾	Pawtucket.....do	Cambridge.....do
Agricultural....do	Salem.....do	Andover.....do
Beverly.....do	Springfield.....do	Falmouth.....do
Bedford Com'l ..do	Taunton.....do	Mercantile.....do
Commercial.....do	Worcester.....do	Lynn Mechanics'do
Dedham .....do	Blackstone.....do	Merch'ts Salem..do
Gloucester.....do	Fall River.....do	do N. Bedford..do
Hampshire.....do	Exchange.....do	Bunker Hill.....do
Franklin.....do	Danvers.....do	Atlantic.....do
Sunderland.....do	Asiatic.....do	Franklin.....do
Hampden.....do	Mendon.....do	Lowell.....do
Mechanics'.....do	Oxford.....do	Brighton .....do
Marblehead.....do	Millbury.....do	Central.....do
Newburyport....do	Housatonic.....do	Greenfield.....do
Phenix.....do	Hamp Manufacs'do	Essex .....broke
Pacific.....do	Barnstable.....do	Farmers'.....broke
Manu. & Mech..do	Leicester.....do	

RHODE-ISLAND.

U. S. Branch.par a¾	Village Bank...¼a¾	North Kingston ¼a¾
Providence.....¼a¾	Smithfield Lime	Mount Hope....do
Union.....do	Rock .....do	Pawtuxet.....do
Exchange.....do	Newport Bank..do	Phœnix.....do
Mechanics'.....do	Roger Williams .do	R. I. Central....do
Globe.....do	Scituate.....do	Warren.....do
Manufacturers'..do	Kent.....do	Warwick.....do
R. Island Union.do	Eagle, Bristol...do	R. I. Agricult'l..do
Rhode Island....do	Do. Providence..do	Cumberland.....do
Merchants' Provi-	Mount Vernon...do	N. E. Pacific....do
dence.....do	Cranston.....do	Smithfield Union.do
Do. Newport....do	Bank of Bristol..do	High Street.....do
N E. Commercial do	Commercial.....do	Woonsockt Falls.do
Washington.....do	Freemans' .....do	Mech. & Manufs..do
Burrilville Agric.	Franklin.....do	Far. & Mech broke
and Manuf....do	Landholders'....do	Burrilville.....do
Smithfield Exch.do	Narragansett....do	

CONNECTICUT.

U. S. Branch.par a	Hartford ¼a1	Union ¼a1
Norwich . $5 par	Phœnix .....do	New Haven.....do
Bridgeport ..$5 do	Middletown .....do	Thames.....do
Fairfield Co....¼a½	Mechanics' .....do	Windham Co....do
do Branch.do	New-London....do	Stonington.....do
East Haddam....do	City Bk, N. Hav.do	

NEW-YORK.

U. S. Branch...par	Bank of Albany.¾a¼	Westchester Co..½
City Banks.....do	State Bank .....do	Central Bank.....½
Long Island Bk..do	Commercial, $50.do	Auburn .....do
Dutchess Co....do	Bank of Troy ...do	Rochester.....do
Lansingburg ....do	Farmers', $50...do	Jefferson County.do
Poughkeepsie ...do	Mohawk.....do	Geneva.....do
Catskill.....¼	Utica .....¼	Chenango .....do
Newburgh .....do	Do. Branch.....do	Bk Columbia.broke
Do. Branch....do	Ontario.....do	Middle District..do
Mech. & Farmrs.¼a¾	Do. Branch....do	Franklin Bank...do

NEW-JERSEY.

Trentn B. Co. $5 par	Morris Canal.....½	Commercial.....½
State B Newark..½	Newark B. Co...do	Cumberland ....do
Do. Morristown.do	Orange .....do	Salem B. Co.....1
Do. Elizabeth...do	Washington.....do	Paterson.....do
Do. Camden....do	People's .....½	Monmouth ..broke
Do. N Brunswick.do	Sussex .....½	N.J. Manuf. Co..do
Farm. & Mech. } do	Farmers .....do	Franklin.....do
at Rahway.. }	Bk N Brunswick.do	Jersey.....do

* State Banks at Newark, Morristown, and Elizabethtown, par $5 par; N Brunswick, do $50 do; F. & M. Rahway, $10 do

DELAWARE.

Farmers.....¼a1	Wilm. & Brand. ¼a1	Smyrna ¼a1
Do. Branches..do	Delaware .....do	Commercial ....do

MARYLAND.

U. S. Branch ....½	Bank Maryland.¼a½	Hagerstown.....1
Baltimore Bks..¼a½	Frederick co....do	Susquch. Bridge...2
Farmers .....do	Westminster ...do	Elkton .....broke
Do. Branches..do	Farmrs & Mech..do	Planters .....do

DISTRICT COLUMBIA.

Patriotic.....¼a1	Alexandria ¼a1	Mech. George'n.¼a1
Metropolis .....do	Potomac.....do	Do. Alexandria.do
Washington ....do	Union .....do	Farmers & Mech.do

VIRGINIA.

U. S. Branch... ½	Farmers.....¼a1	Virg. & Brnches.¼a1
Vally, & Branch.¼a1	Do. Branches..do	Northwestern....5

NORTH CAROLINA.

State, & Brans.2½a3	Newbern & Br'h 2½a3	C. Fear, & Br'h. 2½a3

SOUTH CAROLINA.

U. S. Branch.....½	Union.....1½a2	State Bank.. 1½a2
Plant & Mech..1½a2	South Carolina..do	State Bank S.C ..do
Commercial Bank, at Columbia, 2a2½.		

OHIO.

U. S. Branch... ½	Marietta..... 4	Farmers & Mech. 4
Chillicothe..... 4	Lancaster; .....do	Belmont.....do
Western Reserve do	Mount Pleasant..do	Commercial.....do
Franklin.....do	Farmers.....do	Steubenville..broke

GEORGIA

U. S. Branch.....½	Augusta.....2a2½	*Macon.....2a2½
Planters.....2a2½	State B. & Brh's.do	Darien.....2a2½
Marine & Firelns.do	Merch. & Planters †	Augusta In. & Bk.do

* The Bank of Macon has failed. The other Banks in Macon are good at the rate quoted above. †Failed.

MICHIGAN

Michigan Banks.....	1

LOUISIANA.

U. S. Branch ... ½	State 2½a3, Or'l 2½a3	Louisiana..... 4

MISSISSIPPI.

State of Mississippi	3

ALABAMA.

U.S. Branch.. ½	Mobile 2½a3, State 2½a3	Tombeckbe....60

MISSOURI.

U. S. Branch	½

CANADA.

Canada Banks.....	3a